BUILD CHUCK YEAGER'S P-51D MUSTANG »

p.26

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On the Cover

Longtime *FineScale Modeler* contributor Phillip Gore helps us celebrate the 50th anniversary of the original "Star Trek" television series with a typically flawless rendition of the original ship.

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Turning the Tide

Length: 146mm

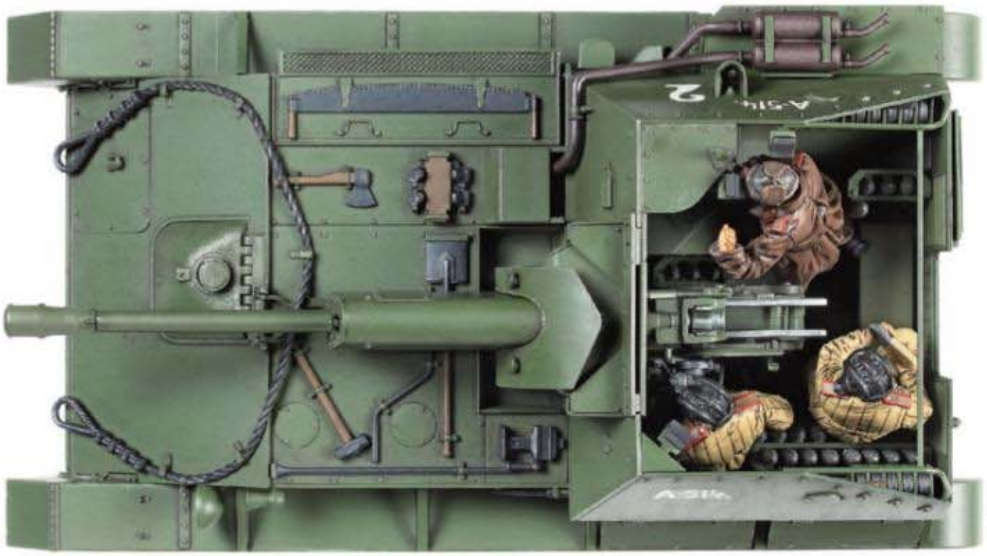
1/35 SCALE

1/35 Military Miniature Series

Russian Self-Propelled Gun SU-76M (Item 35348)

The SU-76M filled an important Soviet need for an effective self-propelled gun against invading German forces after the start of Operation Barbarossa in WWII. Based upon the T-70 light tank chassis, it was production-friendly and some 11,000 were manufactured between 1943 and 1945 – second only to the T-34. Deployed from the Battle of Kursk through to the Allied victory at the end of the conflict, its 76.2mm ZiS-3 gun helped it to play a valuable part offering supporting fire and as an anti-tank weapon. Superior mobility was its calling card, and the SU-76M was also able to operate in close unison with infantry units. Now, it joins the Tamiya 1/35 Military Miniature series–don't miss this opportunity to add a fascinating subject to your collection!

★Exhaustive surveys of a real SU-76M ensure the model accurately captures the open-top self-propelled gun form. ★Realistic assembly type tracks feature 1-piece straight sections and jig for construction. ★Comes with 2 marking options.



★Contains 3 figures in authentic pose.

★Detailed interior uses fuss-free assembly but shows great touch on gun breech and sights, shell racks, and so on.

★The SU-76M form with open top fighting compartment is breathtakingly captured.

★76.2mm gun parts breakdown and attachment was inspired by the real vehicle. Poly caps allow movement.

RUSSIAN SELF-PROPELLED GUN SU-76M

Selected 1/35 scale Russian subjects available from Tamiya

Russian T34/76 Tank "ChTZ" Version 1943 Production (Item 35149)

Russian Heavy Tank JS-2 Model 1944 ChKZ (Item 35289)

Russian Army Assault Infantry (Item 35207)

★Images show assembled and painted kit.
★Product may vary from images shown.

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EDITOR'S PAGE

By Mark Savage

What the heck ... !

HOLY COW! Is that a sci-fi model on *FSM*'s cover?

You bet! And yes, it's been a while.

Last time sci-fi made the cover was 1999 when everyone had their shorts in a bunch over the pending Y2K crisis. Luckily we all survived, and now here we are with the starship *Enterprise* boldly taking us into the summer.

This is Phillip Gore's version of the *Enterprise* as it appeared in the pilot of TV's "Star Trek" 50 years ago. Can we be that old?

Seems like "Star Trek: The Next Generation" was just on the tube, my two kids huddled in front of it. Uh, my baby is 32!

In any case, we felt the 50th anniversary of the best-known and most popular sci-fi TV series was reason enough to show you not only Phillip's retooling of the Polar Lights kit, but also cinema pro and modeler Steve Neill's giant-sized *Enterprise*, with how-to tips if you're going "full monty" on a Starfleet ship.

Now don't you aircraft and armor guys think we've forgotten about you. We've got you covered with a stellar P-51, none other than Chuck Yeager's *Glamorous Glen III*, an expanded Airbrushing & Finishing column on pre-shading a German SdKfz 232, and enough weathering to turn a pickup truck into a rust bucket.

TV'S "STAR TREK" IS 50. CAN WE REALLY BE THAT OLD?

"Most Wanted" is back!

This issue we also revive our popular "Most Wanted" feature, a survey of what kits you want to see the model makers produce.

So please take a few minutes to go to our website and fill out a "Most Wanted" survey form to let us, and the manufacturers, know what's on your kit A-list. We'll share the vote outcome in a fall issue.

For now, we hope you enjoy our foray into the popular sci-fi world *(watch for an online Steve Neill feature)* and remember to beam up, er, buy, a copy at the newsstands for one of your Trekkie friends.

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Off the Sprue!

Favorite family vacation?
Monica: Pictured Rocks National Lakeshore, Lake Superior, Upper Michigan
Aaron: Yeppoon, Australia. Weather was lousy, so I built the USS *John F. Kennedy*.
Mark H.: My wife found round-trip tickets to Paris for $288, so we took both kids to France for a week.
Elizabeth: The idyllic village of Wengen, Switzerland, City in the Clouds.
Mark S.: Whale watch off N.H. coast

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SCALE TALK

Your voice in *FSM*

Slow and simple wins the race

I just read Stanley Swan's Scale Talk letter in the February 2016 issue and it really hit home. I was an avid modeler back in my youth, but kids and career put that on hold for years. Now I'm coming back to modeling, and I've found the skills I once had seem to have evaporated.

Recently, while trying to convert Monogram's 1/48 scale C-47 to a post-war DC-3, I found I was over my head. What seemed like a simple plan has turned into a major project. I look at the mess on my desk and think, "A 12-year-old could build a better model." And then I remember that I used to be that 12-year-old. While it's great fun to get back into modeling, I should take Mr. Swan's advice to heart: Take it slow, keep it simple, and the skill set will return gradually.

Thanks for all the wonderful advice in your magazine, and all the inspiring photos. I look forward to them each month. Maybe someday I'll be able to contribute photos of one of my models, if ever I can build one that doesn't look like it was thrown together by a little kid.

– Dennis Powell
Council Bluffs, Iowa

There's always room for sci-fi

I'd like to take a moment to thank you for including Fausto Muto's article on painting a sci-fi ship (p. 42) in the March 2016 issue of *FineScale Modeler*.

As a longtime subscriber (10+ years) and an avid sci-fi builder, I had feared the new editor of *FSM* would dismiss sci-fi model building and revert to the same old fare of WWI, WWII, and other war-era combat craft and ships. As one of the "younger crowd" who grew up with sci-fi (I'm 48), I'm very glad to see my style of modeling continue to be included in *FSM*.

Thanks very much!

– John Cook
Nashua, N.H.

Ed.: Thanks John, and for the record, I'm old enough to have watched "Star Trek," the first generation. Hope you, and many others, will enjoy our "enterprising" stories this issue.

Small details make the diorama

Your article "How to build a hardened aircraft shelter" in the March 2016 issue was spectacular and very much appreciated. I have often wondered why manufacturers often overlook many of the small details that make a diorama more real. In this case, it was the inclusion of a hardened aircraft shelter that brought the Cold War diorama to life.

As a U.S. Air Force veteran stationed in Europe, I can say that Jean-Paul Poisseroux's build was a classic example found on many bases at the height of the Cold War. Although his French version was slightly different from the U.S. version, it still brought back many memories and details of the extensive time I spent in them as an A-10A crew chief.

Now if I can only replicate Jean-Paul's fantastic work in 1/48 scale, I'll be set in re-creating that time frame.

Thanks again for the fantastic article!

– David Weber
Dell Rio, Texas

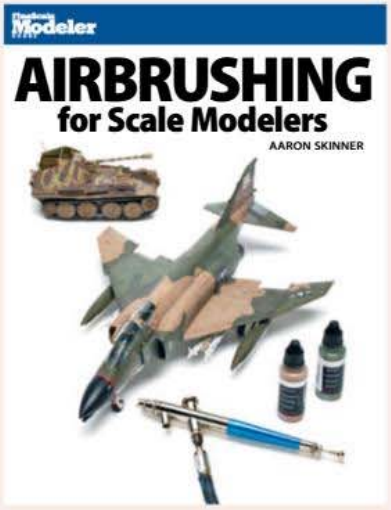
Overboard on the tiny parts?

About 60 years ago, I started building plastic models. Kits from Aurora, Lindberg, and early Revell had parts counts of maybe 15, 20, or 25. These kits were sparse on details, but fun and easy to build, and fun to play with. Fast-forward to the present, and the variety and quality of newer kits boggles the mind. I am always impressed with these newer products when reading *FSM* reviews. I marvel at the part counts for many newer kits: 100, 200, 300, even 1,000 or more parts to delight and challenge us for an enjoyable build.

But now I wonder about high part counts. Is there a competition among manufacturers to provide us with a lot of parts, to break down the components of a subject into as many pieces as possible as a selling point?

At the pleasant age of 70, I still have good dexterity, hand-to-eye coordination, and good vision (aided, of course, by an optical magnifier). I have all the appropriate tools, including rubber-coated tweezers. However, some of the kits on my work table have parts that are difficult to handle. Without naming names, one armor kit has parts smaller than the head of a pin. One aircraft model has the nose gear broken down into five spindly parts. Another has 1/72 scale missile fins molded as separate pieces.

Separating these parts from their sprues is difficult, as is trimming sprue attachment points and removing mold-seam lines (I broke one of the spindly landing gear components during cleanup). I prefer slower setting liquid styrene cement to allow time



A "must have" read

FineScale Modeler Senior Editor Aaron Skinner has hit one out of the park with his new book, *Airbrushing for Scale Modelers*.

I have already read it twice since buying it five days ago, and have learned essential insights into airbrushing with each reading — I simply cannot put it down!

Aaron has a masterful touch in effectively writing for his fellow modelers, adding touches of humor every so often.

Notwithstanding his obvious modeling talents, he explains airbrushing's critical techniques with excellent photos, and supplements them with a writing style that reveals his wealth of experience yet keeps explanations clear and simple for his fellow modelers.

This reference is a "must-have" for all *FSM* modelers.

Kudos to you, Aaron! Keep 'em coming our way.

– Robert Pierson
Dakota Dunes, S.D.

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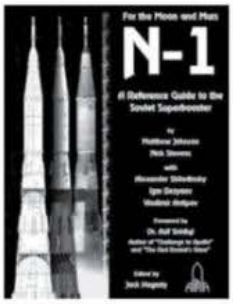

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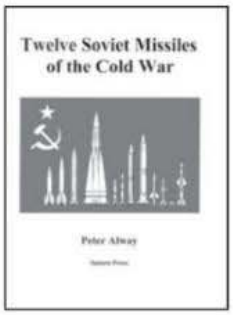

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to get proper alignment, but gluing the parts is difficult to accomplish without leaving glue smears.

Are manufacturers going overboard on parts counts, or is it time for me to look into assisted living?

– Don Frankfort
Hot Springs, S.D.

Fun without doodads

I remember when I was a kid coming home from the hobby shop with a tube of glue, some paint, and a new kit. Man, the excitement!

Rushing to the kitchen table, and my mom putting the old sheet on it just in case. Poring over the box art and reading the instructions front to back. Twisting the parts off the trees and carefully painting each part. An hour or so later I had a finished model that I was proud to have built.

Now, I have graduated to airbrushes and I trim the parts off the trees and file down the rough spots. I also started getting *FSM* with its great tips and awesome builds and builders.

But now I'm indecisive. Should I paint and then assemble, or vice versa? Should I paint the seam lines for a more-realistic look? Should photo-etched parts replace the exhaust stack on the Tiger tank in order to repair the imperfections in the kit?

Somewhere out there, an 11-year-old kid is getting the bug to build. You need to bring that excitement back to us older modelers. Show an average guy building something right out of the box, just for the fun of it. No doodads, no fancy weathering powders — just show them how to build a simple nice-looking model he or she can be proud of.

– Robert E. Iams
Lexington, Ohio

Sci-fi snowball effect

I received the March 2016 issue recently and have to say at first I thought, "Great, another tank review." However, as I started reading I encountered the Form & Figure page, which lifted my spirits quickly. I really like the new section.

As I continued to read, my spirits mellowed a little until I turned to p. 42 and found the article, "Painting a sci-fi ship for realism" alongside the small note written by Aaron about modeling anime.

About six months ago, a club member was ranting and raving about his Bandai "Space Battleship *Yamato* 2199" kit, and on a dare I purchased the exact kit, the Type 99 Cosmo Falcon, jokingly saying we would build four of the same kit and paint them like a futuristic Blue Angels Team.

My first experience with a Bandai kit was nothing short of magical. The kit was engineered perfectly, the parts do not require extensive cleanup, and fitting is clean. The beauty of these kits is you can build them right from the box with very little paint and glue or you can go all-out. Either way, will produce a very nice model.

I decided to find more Bandai "Space Battleship *Yamato* 2199" kits to work on, only to find they make "Star Wars" kits as well. My other half was not all that happy when boxes and boxes of kits from Japan started to show up. Luckily, I was sent to my room to contemplate the error of my ways. Now, I am trying to figure out how to wire up LEDs into some of the kits.

Keep up the great work.

– Skip Paetz
Virginia Beach, Va. **FSM**

Form & Figure to the rescue

I was glad to see the new Form & Figure column in your magazine. While I have only been modeling for the past few years, I enjoy building figures the most.

The timing of Joe Hudson's article could not have been better. I have been working on painting a face on a 120mm figure and was about to start all over again (for the 6th time) until I read his piece.

I look forward to future articles.

– Vince Cordaro
Pottstown, Pa.

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Compiled by Aaron Skinner

Fearsome Foxhound in 1/48 scale

MiG-31 looks great in all-new plastic kit

Capable of exceeding Mach 2.8 and tracking and engaging multiple targets, the Mikoyan MiG-31 is a formidable interceptor. Known to NATO as the Foxhound, the two-seat fighter entered Soviet service in the early 1980s. More than 250 of them still fly with the Russian and Kazakh air forces.

AvantGarde Model Kits' (AMK) new 1/48 scale MiG-31BM/BSM (No. 88003) looks terrific in the box. The dark gray plastic is engraved with fine panel lines and rivets, and the engineering of the major parts should produce a sturdy, detailed model of the large plane — 18" long in 1/48 scale — with reinforcements inside. The slide-molded forward fuselage is amazing.

Engines with two-part front fans, afterburners, and long jet pipes are sandwiched by the rear fuselage. Long trunks with internal detail join the engines to the intakes.

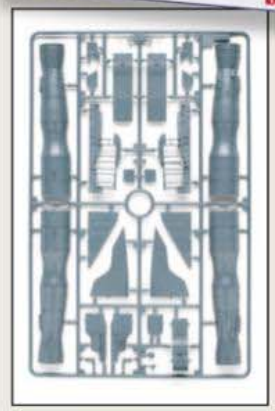
The cockpit has ejection seats for the pilot and weapon system operator. First-rate moldings provide controls and dials for the side consoles and instrument panels.

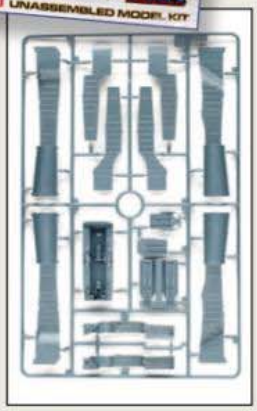
Other features include: optional parts to pose the slats and flaps up or down; different refueling probes; posable intake ramps and elevators; metal weights for the nose; scale-thin landing gear; photo-etched D-rings; and optional clear parts to pose the canopies open or closed.

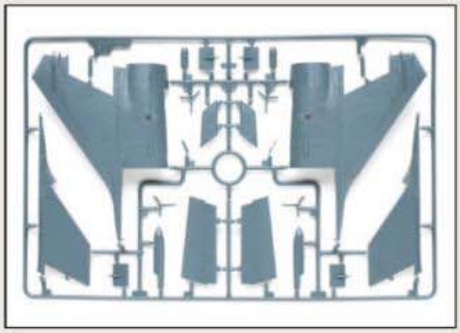
Three types of missile are provided, including: four R-33 "Amos," four R-73 "Archer," and four R-77 "Adder."

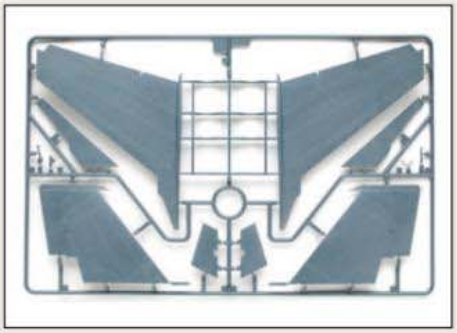
Decals give markings and stencils for three Russian air force MiG-31s, including two variations for one.

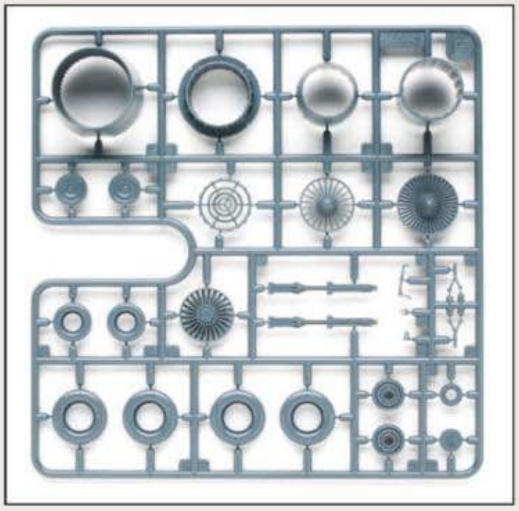
AMK's "Foxhound" sets a new standard for molding and engineering; according to *FSM* reviewer Matthew Walker, it's "an absolute delight" to build. Look for his detailed report in an upcoming issue. The kit costs $79.99.

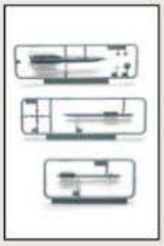


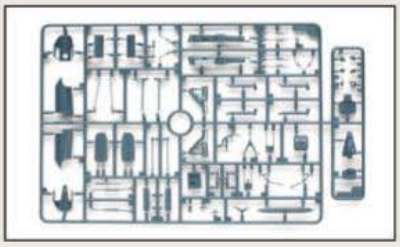


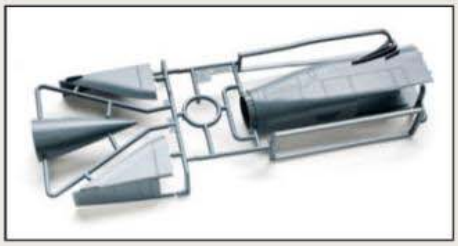




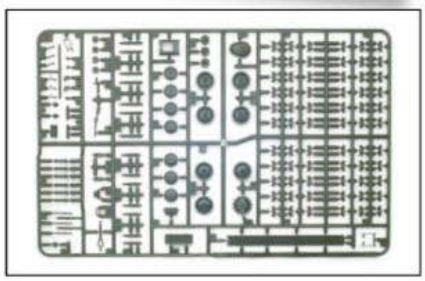


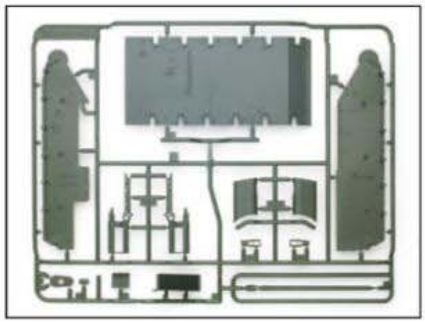


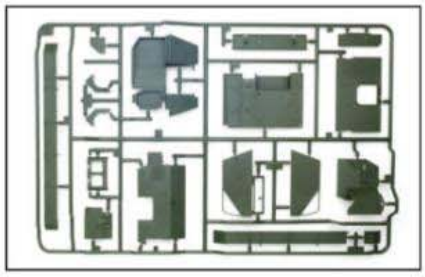




New SU-76M from Tamiya







Tamiya likes to surprise — and its latest 1/35 scale offering, a 1/35 scale SU-76M (No. 35348), fits that trait. This light self-propelled gun was the second most-produced Soviet armored vehicle of World War II (after the T-34). Designed for infantry support, the SU-76 served on the Eastern Front and after the war, including in Korea.

The small hull comprises several flat panels with detail molded inside and out. Rounds for the 76mm gun, magazines for the PPSh-41 submachine guns, and a radio fill the fighting compartment. The main gun's one-piece barrel ends with a two-part muzzle brake.

The road-wheel arms are keyed for alignment, and the wheels have sharply molded bolts and hubs as well as inserts to detail the inner faces. Link-and-length tracks wrap the running gear; jigs are included to sag the upper runs over the return rollers.

Three figures — commander, gunner, and loader — crew the cramped vehicle.

Decals provide markings for three vehicles: one in East Prussia in 1944 and two in Berlin in 1945.

Another example of Tamiya's thoughtful engineering and ease of construction, the SU-76 costs $53.

Airbrush cleaning and maintenance made easy

Iwata's new maintenance tools (No. CL500) come in a heavy zippered pouch that includes space for several airbrushes.

Designed for Iwata brushes, the set features a self-centering nozzle wrench and an air-valve guide wrench. The latter has two ends to remove small- and large-diameter valves for cleaning and servicing, as well as to adjust the tension on the main lever spring.

If you've ever fought to remove air caps or other screw fittings, you'll appreciate the soft-jaw pliers that can loosen most parts without marring the finish or damaging the brush.

Finally, the set provides 1.2mm and 1.4mm needle-packing screwdrivers. Packing prevents paint getting into the valve and trigger mechanisms. These drivers easily remove the screw and packing, which should come out of the brush on the pin of the driver.

The set costs $99.95.

BOOKSHELF

Get to know *California*

Designed using lessons learned from World War I, USS *California* was sunk by Japanese bombs and torpedoes during the attack on Pearl Harbor. Salvaged and repaired, the *Tennessee*-class battleship operated in the Pacific through the war.

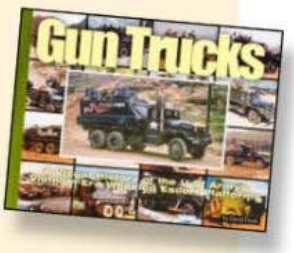
David Doyle collects hundreds of photos of the ship in *USS* California —*A Visual History of the Golden State Battleship BB-44* (Ampersand, ISBN 978-0-9773781-7-3, $32.95). The 168-page hardback covers the ship's construction and launch, service between the wars, Pearl Harbor, rebuilding, and WWII. Color profiles of the ship and its aircraft are included.

Scaring up Phantom info

If you need help separating F-4Bs and FGR.2s, check out Peter Davies' *USN McDonnell Douglas F-4 Phantom II* (Osprey, ISBN 978-1-4728-0495-2, $19).

Number 22 in the Air Vanguard series, the 64-page softcover quickly details the development and technical aspects of the naval F-4. The heart of the book is the breakdown of differences between versions and the Phantom's operational history, both American and British. Photos and diagrams support the text.

An arsenal of inspiration



Faced with attacks on supply convoys in Vietnam, American troops began modifying trucks with additional armor and heavier firepower.

These vehicles are the subject of *Gun Trucks — A Visual History of the U.S. Army's Vietnam-Era Wheeled Escort Platforms* (Ampersand, ISBN 978-0-9861127-3-7, $22.95) by David Doyle.

Starting with a survey of the vehicles and weapons systems used in gun trucks, the 120-page softcover is illustrated with hundreds of photos, most of them contemporary, of the unique trucks and jeeps. There's a lot of modeling inspiration to be found here.

NEW PRODUCTS

Compiled by Monica Freitag

AIRCRAFT

1/24 SCALE KITS

de Havilland Mosquito FB.VI from Airfix, No. A25001A, $219.99.

1/32 SCALE KITS

Dornier Do 335A fighter-bomber from HK Models, No. 01E08, $169.95. Look for a detailed review in an upcoming issue of *FSM*.

1/32 DECAL SETS

F-16C Blk50 - 50 Years of YGBSM from TwoBobs, No. 32-065, $14.

www.FineScale.com

featuring photo galleries, product information, reviews, and more!

1/32 DETAIL SETS

Vickers Colt Mk.I WWI gun from Eduard Brassin Line, No. 632 068, $7.95.

1/35 SCALE KITS

Horsa glider wings and rear fuselage (tail unit) set from Bronco Models, No. AB3574, $99.99.

1/48 SCALE KITS

Ultimate Sabre from Eduard, No. 1163, $89.95. Limited Edition. Hasegawa plastic with resin and photo-etched details, painting masks. Five marking options for USAF F-86Fs.

Republic RF-84F Thunderflash from TanModel, No. 2201, $79.99. Look for a detailed review in an upcoming issue of *FSM*.

B-29 Superfortress from Revell, No. 85-5718, $79.95.

English Electric Lightning F.1/F.1A from Airfix, No. A09179, $44.99.

SBD-5 Dauntless from Eduard, No. 1165, $54.95. Limited Edition. Ex-Accurate Miniatures plastic with resin and photo-etched details, painting masks. Five marking options.

Mikoyan MiG-31 BM/BSM "Foxhound" from AvantGarde Model Kits, No. 88003, $79.99. Look for a detailed review in an upcoming issue of *FSM*.

1/48 DETAIL SETS

Packard V-1650-7 inline engine from Resin 2 Detail, $24.99.
Improvement set for HobbyBoss Ta152C from Fusion Models, No. FUS4816, $19.99.
Ta 152C propeller and spinner from Fusion Models, No. FUS4815, $9.99. For HobbyBoss and Dragon Ta 152C.
EA-3B conversion (for Trumpeter TA-3B), No. SBA48981, $14.99; **F-14 A/C fans** No. SBA48142, $5.99. To be used with photo-etch parts. Both from Steel Beach Accessories.
F-15 Slime lights from Steel Beach Accessories, No. SBA49053, $2.99. For all F-15 kits.
F-4 wheel bay jigs (for Academy) from Steel Beach Accessories, No. SBA48984, $9.99.
F-4S conversion (for Academy) from Steel Beach Accessories, No. SBA48982, $12.99.
TA-3B turret (for Trumpeter) from Steel Beach Accessories, No. SBA48141, $5.99.

Mirage III E interior for Kinetic - Zoom from Eduard, No. FE742, $16.95. Photo-etched.

Mirage IIIE exterior for Kinetic from Eduard, No. 48866, $24.95. Photo-etched.

F-86F-30 upgrade set for Eduard from Eduard, No. 48863, $24.95. Photo-etched.

1/72 SCALE KITS

BAe Hawk T.1 Red Arrows from Revell, No. 04821, $12.95. Level 3. Look for a detailed review in an upcoming issue of *FSM*.

Nakajima B5N2 Kate Grumman F4F-4 Wildcat from Airfix, No. A50169, $29.99. Dogfight Doubles. Includes 10 acrylic paints, 2 brushes, and 2 tubes of cement.

Grumman F4F-4 Wildcat Starter Set from Airfix, No. A55214, $15.99.

Dornier Do17z Boulton Paul Defiant Mk.I from Airfix, No. A50170, $29.99. Dogfight Doubles. Set includes 12 acrylic paints, 2 brushes, 2 poly cement.

Bristol beaufighter TF.X Focke-Wulf Fw190A-8 from Airfix, No. A50171, $29.99. Dogfight Doubles. Set includes 10 acrylic paints, 2 brushes, 2 poly cement.

Avro Shackleton MR.2 from Airfix, No. A11004, $54.99. Look for a detailed review in an upcoming issue of *FSM*.

Junkers Ju87B-1 Stuka from Airfix, No. A03087, $13.99. Look for a detailed review in an upcoming issue of *FSM*.

Bv P178 tank hunter with fliegerfaust B rocket system from Bronco Models, No. GB7004, $38.99.

Bristol Beaufighter TF.X from Airfix, No. A04019, $19.99. Look for a detailed review in an upcoming issue of *FSM*.

1/72 DECAL SETS

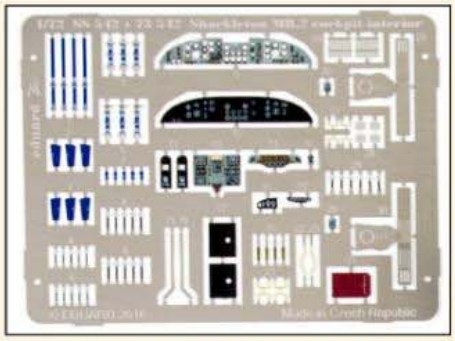
de Havilland Mosquito FB.Mk. VI/B.VI/B.XX/T.III from Xtradecal, No. X72232, $8.75. Options for 13 aircraft, with markings for RAF, USAF, RAAF, and RCAF aircraft.

A.W. Whitley B.Mk.V/GR.VII from Xtradecal, No. X72231, $19.95. Markings for 10 RAF bombers.

1/72 MASK SETS

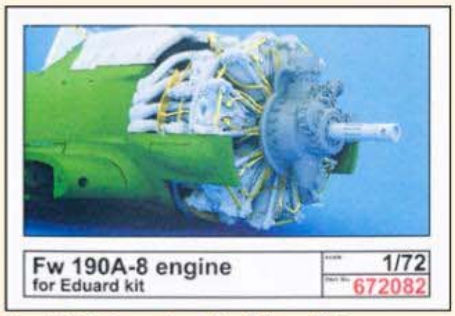
Shackleton MR.2 (for Airfix) from Eduard Brassin Line, No. CX434, $16.95.

1/72 DETAIL SETS



Shackleton MR.2 cockpit interior (for Airfix) — Zoom from Eduard, No. SS542, $19.95. Photo-etched.

Shackleton MR.2 landing flaps (for Airfix) from Eduard, No. 72616, $34.95. Photo-etched.



Fw 190A-8 engine (for Eduard) from Eduard, No. 672082, $19.95.

1/144 SCALE KITS

Handley Page Victor K.2 RAF tanker from Great Wall Hobby, No. L1005, $54.99.

Boeing 777-300ER from Zvezda, No. 7012, $39.99.

Avia B.534 early series from Eduard, No. 4451, $29.95. Super 44 Quattro Combo.

ARMOR

1/32 SCALE KITS

Crusader Mk.III from Airfix, No. A08360, $34.99.

17 Pounder anti-tank gun and crew from Airfix, No. A06361, $29.99.

1/35 DETAIL SETS

Village Fountain A No. 35027, $14; **Wooden crates** No. 35025, $6.50; **Manhole covers (photoetched)** No. 35031, $8.75, all from Matho Models.

Hinges from Matho Models, No. 35030, $6.50. Hinges: 17 small, 9 medium single angled, 9 medium double angled, 5 large ornamental.

1/35 DECAL SETS

US halftracks and M5A1 Stuart in North Africa from AK Interactive, No. AK811, $7.

1/35 SCALE KITS

Kfz 15 Fünkwagen from Italeri, No. 6526, $31.99.

Tiger I PzKpfw VI Ausf E early production with full interior from Rye Field Model, No. RM-5003, $74.99. Look for a detailed review in an upcoming issue of *FSM*.

Leopard 1 from Revell, No. 03240, $32.95. Level 4. Look for a detailed review in an upcoming issue of *FSM*.

Panzerkampfwagen Mk.IV, 744 (E) (A13) and UE fuel tank trailer from Bronco Models, No. CB35030CP, $64.99.

Tiger 1 PzKpfw VI Ausf E SdKfz 181 Tunisian Initial from Bronco Models, No. 6608, $79.99. Dragon 1939-1945 series, Smart Kit.

German Horch Fu Wg (Kfz 15) radio car from Bronco Models, No. CB35182, $72.99.

sWS 60cm Infrared Searchlight Carrier Uhu from Bronco Models, No. CB35212, $69.99.

Panther Ausf D V2 from Dragon, No. 6822, $69.99. 1939-1945 series.

M107 US self-propelled gun (Vietnam War) from Tamiya, No. 37021, $54. Italeri kit with Tamiya figures and accessories.

1/48 SCALE KITS

Albion 3-Point Fueller from Airfix, No. A03312, $17.99.

Manufacturer/Distributor Directory

Aero Research Co.
www.AeroResearchCDs.com

Airfix
253-926-9253
www.airfix.com
www.hornbyamerica.com

AK Interactive USA
www.ak-interactive-usa.com

Dragon Models USA Inc.
626-968-0322
www.dragonmodelsusa.com
- Aoshima
- Bronco
- Cyber-hobby
- Dragon
- Fine Molds
- Fujimi
- G.W.H.
- Master Box
- Mini Art
- Platz
- Riich
- Showcase Models Australia
- Takom
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- Nuts & Bolts Books

Eduard
420-47-611-8259
www.eduard.com

Fusion Models
514-356-1883
www.dp9.com/fusion

Great Planes Model Distributors
www.greatplanes.com
- Hasegawa
- Italeri

Hannants
44-1502-517444
www.hannants.co.uk
- Xtradecal
- Xtrakit

Matho Models
www.mathomodels.com

Merit International
626-912-2212
www.merit-intl.com
- Merit
- AFV Club
- Kinetic

Mr. Black Publications
www.mrblackpublications.com

Osprey Publishing
212-850-2294
www.ospreypublishing.com

Pacific Coast Models, Inc.
707-538-4850
www.pacmodels.com
- Amusing Hobby
- Asuka
- Ebbro
- HK Models
- Kitty Hawk
- Takom
- Pacific Coast
- Panda
- Xactscale

ParaGrafix
508-431-9800
www.ParaGrafix.biz

Resin 2 Detail
201-230-6904
www.resin2detail.com

Revell
847-758-3200
www.revell.com

Revell Germany
www.revell.de

Round 2
574-243-3000
www.round2corp.com
- AMT
- MPC
- Polar Lights
- Lindberg
- Hawk

Scale Aircraft Conversions
214-477-7163
scaleaircraftconversions.com

Sprue Brothers
Steel Beach Accessories
www.spruebrothers.com

Squadron Products
877-414-0434
www.squadron.com
- Encore Models
- HobbyBoss
- ICM
- Meng
- Roden
- Rye Field Model
- Super Scale International
- Sword
- True Details
- Trumpeter

Stevens International
856-435-1555
www.stevenshobby.com
- Meng
- Noys Miniatures
- Tanmodel
- Trumpeter

Tamiya America Inc.
949-362-2240
www.tamiyausa.com

TwoBobs
www.twobobs.net

Wingnut Wings
www.wingnutwings.com

1/72 SCALE KITS

Toldi III Hungarian light tank from IBG Models, No. 72030, $15.95.

Toldi IIa Hungarian light tank from IBG Models, No. 72029, $15.95.

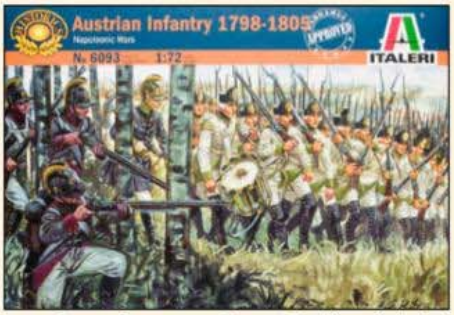
T-34/85 Soviet medium tank from Zvezda, No. 5039, $16.99.

MILITARY FIGURES

1/35 SCALE KITS

If.5 Maschinengewehrwagen 26 (German horse drawn wagon) from Riich Models, No. RV35012, $58.99.

1/72 SCALE KITS



Austrian Infantry 1798 - 1805 from Italeri, No. 6093, $11.99.

The Battle of Waterloo 18 June 1815 from Airfix, No. A50174, $59.99.

SHIPS

1/72 SCALE KITS

Gato Class submarine from Revell, No. 85-0394, $119.95.

SCI-FI

1/48 SCALE KITS

X-wing fighter from Revell, No. 85-5091, $79.99. Master Series. Ex-Fine Molds kit.

1/350 SCALE KITS

Star Trek Klingon Bird-of-Prey from AMT, No. AMT949/12, $13.99.

1/650 SCALE KITS

U.S.S. Enterprise NCC-1701 (Star Trek The Original Series) from AMT, No. AMT847/12, $35.99.

OTHER SCALE KITS

Resistance X-wing fighter from Revell, No. 85-1823, $29.99. Revell SnapTite. Pre-decorated.

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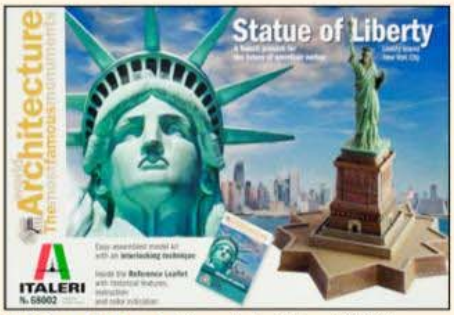
FineScale Modeler magazine receives new products from a variety of manufacturers on a daily basis and we are now able to share all of them with you through our interactive exclusive *FSM* product database. Click on the Product News link at www.FineScale.com.

MISCELLANEOUS

Vision from Dragon/Marvel, No. 36020, $29.99. Marvel Bobblehead Series Two. Hero Remix.

Loki from Dragon/Marvel, No. 36017, $39.99. Marvel Bobblehead Series Two. Hero Remix.

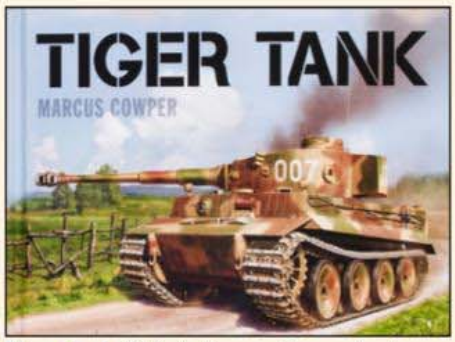


Statue of Liberty from Italeri, No. 68002, $21.99. Look for a detailed review in an upcoming issue of *FSM*.

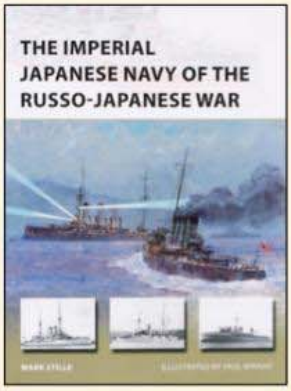
1/250 SCALE KITS

The Parthenon from Italeri, No. 68001, $44.99.

BOOKSHELF



Tiger Tank, $12, by Marcus Cowper, hardcover, 140 pages, color renderings, all black-and-white photos, ISBN: 978-1-4728-1294-0. From Osprey Publishing.



The Imperial Japanese Navy of the Russo-Japanese War, $18, by Mark Stille, illustrated by Paul Wright, softcover, 48 pages, all black-and-white photos, ISBN: 978-1-4728-1119-6. From Osprey Publishing.

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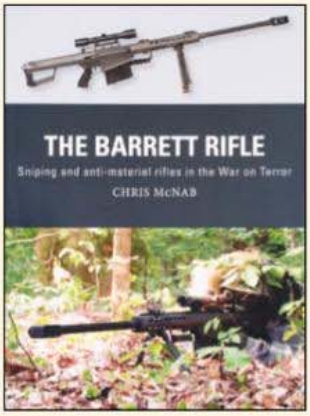
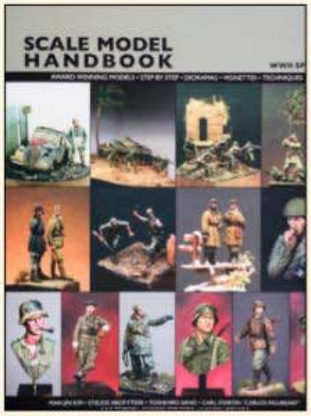
USN McDonnell Douglas F-4 Phantom II, $19, by Peter Davies, soft cover, 64 pages, mostly color photos, ISBN: 978-1-4728-0495-2. From Osprey Publishing .



The Barrett Rifle, $20, by Chris McNab, soft cover, 80 pages, all color photos, ISBN: 978-1-4728-1101-1. From Osprey Publishing .



Scale Model Handbook WWII Special, $19, soft cover, 80 pages, all color photos, ISSN: 2459-3311. From Mr. Black Publications.

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featuring reviews, product information, photo galleries, and more!

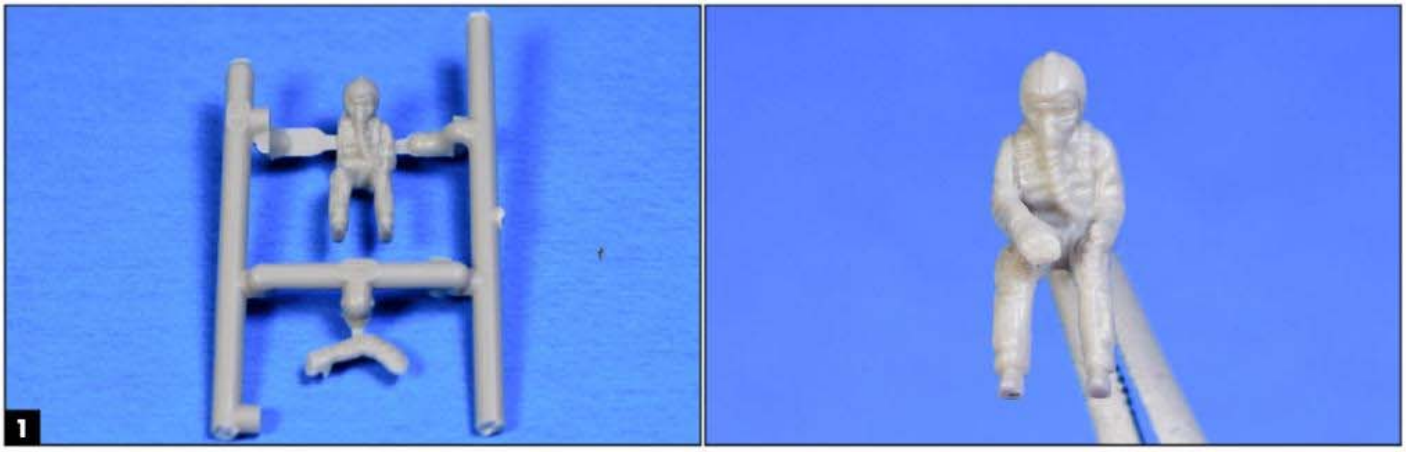
ELECTRONIC MEDIA

F-15 Eagle from Aero Research, No. 1064, $12.95.

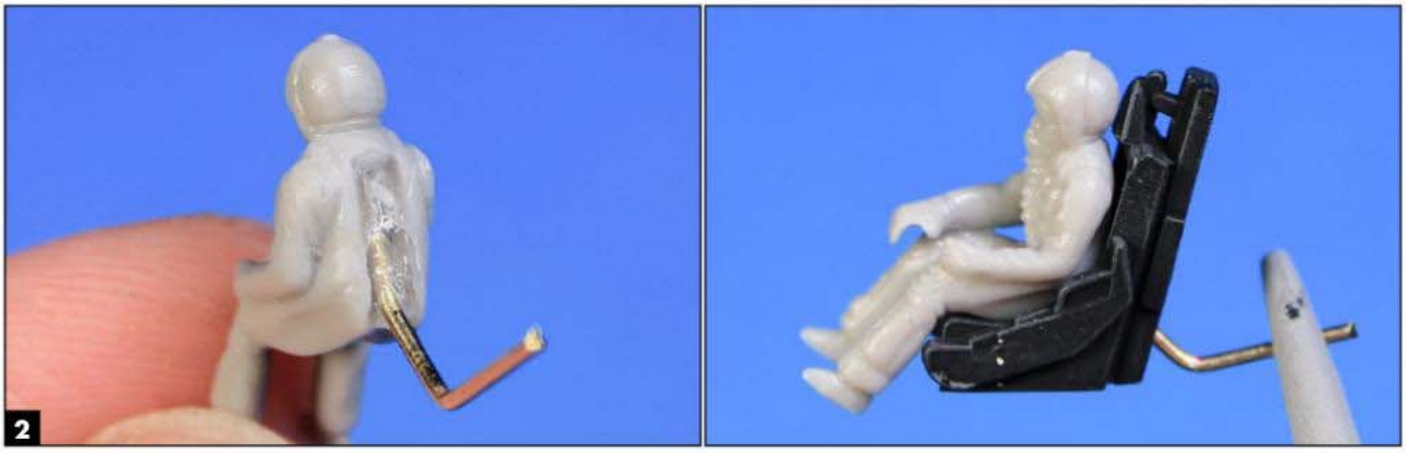
Dressing a pilot in 30 minutes

Small-scale does not imply less detail • BY JOE HUDSON

Pose an aircraft model in flight and you'll want a pilot in the cockpit. Painting small figures can seem daunting, especially for modelers who don't want to spend a lot of time on something so small. I encountered this recently while building Testors' 1/72 scale "Top Gun" F-5 Adversary. I crewed it with an aftermarket figure (either Hasegawa or Fujimi) that I painted quickly so I could get on with building the plane.



Here's the figure on the sprue (left). His right hand didn't reach the control stick, so I snipped it off, cleaned up the cut ends, and reattached it at the correct angle. Super glue filled gaps at the shoulder and wrist.



To securely mount the figure, I super glued fine brass wire to the hollow in its back. More super glue filled the hole. Then I bent the wire and threaded it through a hole in the kit's ejection seat.

Before painting, I brushed black primer over the pilot. Not only does this promote paint adhesion, it also serves as shadowing in the colors to come.

I carefully painted the face beige red and made quick black slashes for the eyes. I didn't spend much time perfecting them because they will be barely visible at this scale. I painted the oxygen mask and hose dark gray, letting the black undercoat show in shadows.

To paint the green flight suit, I hand-brushed U.S. dark green straight from the bottle. I left a little of the black primer to show through in folds and recesses.

I mixed black and purple to produce a dark gray for the sleeves and crotch of the flight suit. A hairdryer sped drying before I painted the shadows of the sleeves pure black with a fine brush.

Next, I mixed purple and German gray for highlights on the sleeves.

A mix of U.S. dark green and stone gray made the gloves a light green that contrasted well with the suit. I added the MiG patch from "Top Gun" to the right shoulder using flat yellow for the outline and flat red for the star.

Vallejo olive green wash emphasized recesses in the G-suit and gloves. Then, I painted a mix of stone gray and dark green to highlight the upper edges of folds and the pilot's knees.

I painted the helmet's visor with a mix of black and dark blue. I lightened the mix with stone gray and painted the top part of the visor to simulate reflected sky. Pledge FloorCare Multi-Surface Finish glossed the helmet.

Attaching the pilot to the ejection seat and cockpit tub finished the process. In 1/72 scale, the figure is barely 1" tall — but a little time spent painting it greatly enhances an airborne model. **FSM**

Vallejo paints used

70.804 Model Color Beige Red
70.884 Model Color Stone Grey
70.893 Model Color U.S. Dark Green
70.930 Model Color Dark Blue
70.950 Model Color Black
70.953 Model Color Flat Yellow
70.957 Model Color Flat Red
70.959 Model Color Purple
70.994 Model Color Dark Gray
70.995 Model Color German Gray
73.602 Black Surface Primer
76.519 Model Wash Olive Green

Next issue

Joe fleshes out his techniques for painting skin as he finishes Marvel superhero Thor. Look for the crown prince of Asgard in the July *FSM*, on newsstands June 7.

You'd think a C-5 Galaxy would be hard to miss in any scale. But, in spite of years of reader requests (mostly for 1/144 scale), it has yet to appear. This survey might be the lucky one!

TELL US! YOUR MOST WANTED KITS

Want to give kit manufacturers a piece of your mind? Here's your chance!

BY MARK HEMBREE

Every few years — 1994, 1997, 1999, 2001, 2003, 2006, 2010, and 2013, to be specific — *FineScale Modeler* has conducted a poll to ask you what plastic kits you'd like to see most.

Through your cards, letters, e-mails, and forum comments, we hear plenty of that all the time. (Thanks for writing!) But on these special occasions, we tally your hopes and desires in the magazine.

You'll be pleased to know there's more to this than just wishful thinking. Wishes do come true — at least 68% of the time. That is the winning percentage of times one or more models in a given category have been kitted after the results of our polls were published in 2010 and 2013.

And, if you reach farther back in the *FSM* archives, that percentage rises. (More time helps.) It seems, in most cases, if there is something you want, it's only a matter of time before you get it.

Is this a great hobby or what?

Here's how to vote

First, think of which kit you want most — no need to agonize, just go with your first impulse. Then, visit www.FineScale.com and take our survey. Read the directions, then cast your votes. Be sure to pay attention to scale.

Rules are rules — and so are these

- ✓ Stick to injection-molded plastic kits — no resin kits or accessories, detail packages, decals, conversion sets, etc.
- ✓ No reissues — new kits only.
- ✓ We've said it before and we'll say it again: Please be reasonable. The more popular and marketable a subject is, the more likely you'll see it produced — although I still say a B-36 Peacemaker in 1/32 scale would be awesome!
- ✓ No crusades, no campaigning, no stuffing the ballot box. These days, those things are easier than ever for us to track. Please, don't be that guy. You are on your honor.

Remember, kit manufacturers may not listen to *us*. But they *do* listen to *you*. This is a great way to let them know what's on your mind and what you'd like to buy from them.

Your deadline is June 6, 2016. (D-Day, an excellent day for a landing!) We'll publish the survey results this fall in *FSM*.

So, what are you waiting for? Go to FineScale.com and tell us what you want. We look forward to it! **FSM**

Painting gray is bl

Stark pre-shading adds life to monochromatic camouflage • BY JOHN BONNANI

High-contrast base coats give Tamiya's 1/48 scale SdKfz 232 the appearance of being in direct sunlight, even under fluorescent lights.

Weathering is as much about mimicking the play of light as it is about battle damage, rust, dust, dirt, and mud. Traditional techniques, such as washes and dry-brushing, do that by emphasizing shadows and highlights. Other techniques have joined modelers' arsenals, including pre-shading, post-shading, and filters, all with the same aim. Any of these can vary monochromatic finishes, which otherwise can appear flat and boring.

When I built Tamiya's 1/48 scale SdKfz 232, I wanted to try an extreme form of pre-shading on German early-war overall gray. Using black and white, I painted it as if it were being seen under midday sun with a strong light source directly above. This technique is sometimes referred to as *zenithal* lighting.

Getting started

Focused on painting, I built the eight-wheeled armored car pretty much straight from the box in about four hours over two nights, **1**. Only a few minor modifications were made: I used a small drill bit to open the four lights on the sides of the upper hull, the brackets for the tools on the front plate, and the gun barrels. I filled the hollow back side of the spare tire with Aves Apoxie Sculpt.

I find it easier to paint details on the vehicle, as opposed to painting them separately and attaching them at the end. So, I built the model in four major subassemblies: hull, turret, wheels, and antenna rack.

I sprayed everything with my primer of choice, ColorPlace gray, **2**. (Available at major retailers for about $1.50, it's a good alternative.) Before painting, I placed the can in warm water to improve paint flow and performance.

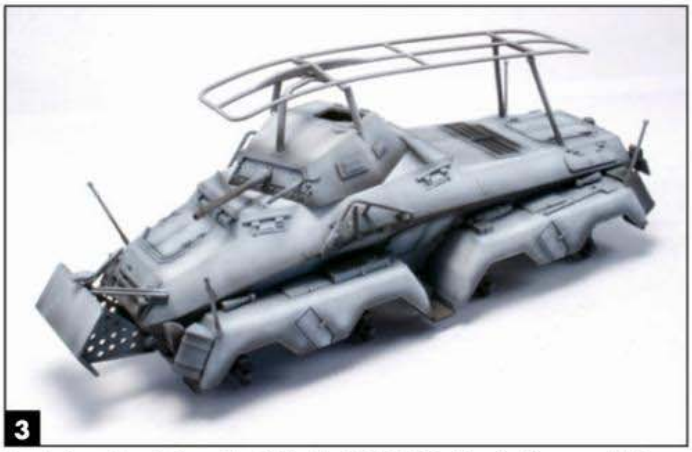
Black and white

To begin the pre-shading, I airbrushed Ammo of Mig Jimenez (Ammo) black primer (A.MIG-2005) onto the vehicle's

ack and white

Tamiya's SdKfz 232 is a fun and easy build. I made only a few improvements to enhance parts, drilling out muzzles, lights, and tool brackets.

Spray-can gray lacquer primer revealed rough spots and served as a solid base for the shades to come. I smoothed imperfections with 2000-grit sandpaper.



Ready for winter? Actually, this is the SdKfz 232 after the first round of pre-shading. The two-step process involved painting shadows black, then slowly building the highlights with white.

Hand-brushed white acrylics on salient points like hinges, hatches, and handles will emphasize them under the gray camouflage to come.

lower surfaces. This acrylic can be sprayed straight from the bottle at 20 psi.

Next came Tamiya white (XF-2) acrylic mixed with 65% thinner and sprayed at 15 psi, **3**. I applied the white in several thin layers, gradually building up the effect. When this step is completed, the upper hull panels should be pure white at the top and blend down the sides to nearly pure black at the bottom.

To enhance details, I hand-brushed Ammo acrylic white (A.MIG-050) onto edges, ridges, hatch outlines, and other raised spots, **4**. I didn't use Tamiya white because I find it difficult to hand-brush.

I used the same paint to simulate chipping, thinning it 50% with water and applying it with an artist's sponge, **5**.

To protect the acrylic paint, I sealed it with Tamiya clear and let it dry overnight.

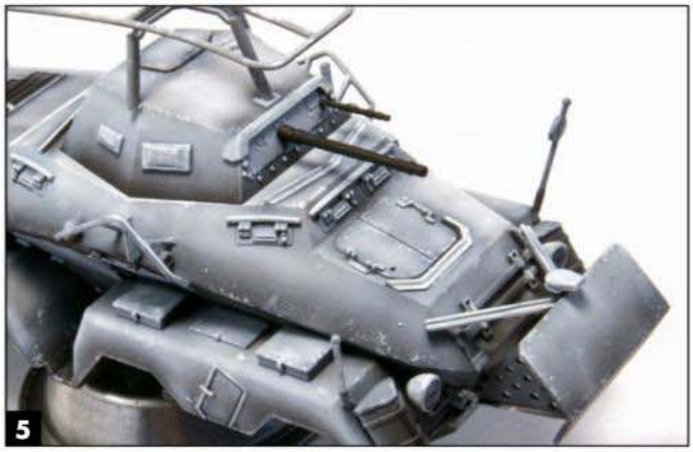
A pinwash of AK Interactive enamel wash for NATO camo vehicles (AK-075) darkened hatch outlines and other recesses, **6**. I used this because the color is close to black.

Finally, I applied AK Interactive streaking grime (AK-012) in thin lines down the model's vertical surfaces, **7**. At this point, the effect is overdone and the model looks cartoonish. But the finishing process will tone it down.

Paint it gray

I mixed a little Tamiya medium blue (XF-18) into German gray (XF-63) for the camouflage color, then added one part paint to four parts thinner in preparation for airbrushing.

I applied it carefully, slowly building up the density, **8**. Rushing at this point would cover everything that had been done, so I took my time.



White paint applied to edges and corners with a fine brush and sponge simulates fresh chips and scrapes.

I flowed a dark wash into panel lines and corners to deepen those shadows under the camouflage.

The final pre-shading step comprised dark streaks that I pulled down panels from chips and scratches at the upper edges.

The proof is in the pudding: Thin layers of dark gray show the underlying pre-shading to great effect.

I prefer oil paints for filters because they have pure, vibrant colors that are perfect for tinting the base coat.

An artist's sponge and a fine brush were used to add dark acrylic paint for another layer of chipping.

Between coats of clear, I applied the decals with help from Microscale's Micro Set and Micro Sol decal solutions.

Then I painted the tools' metal parts with Ammo rubber and tires (A.MIG-033), an off-black color. The wood handles were painted with Vallejo khaki.

Next came an overall filter of Winsor & Newton Prussian blue artist's oils that gave the finish a delightfully subtle hue, **9**. I mixed the filter with Humbrol thinner, which accelerates drying. A day later, I applied a dark pinwash to view ports, engine vents and tool clasps.

Weathering

I wanted a well-worn vehicle with chipping, rust streaks, and dirt.

For chips down to bare metal, I applied AK Interactive chipping color (AK-711) with a fine brush and an artist's sponge, **10**. I thinned the paint with equal parts water.

Fresh rust streaks followed. I dabbed a dot of AK Interactive rust oil paint (AK-504) on a chip, then drew it down the surface with a brush slightly damp with thinner, **11**. The result should be a line that fades down the surface. If you're not satisfied with the results, remove the streak with a little more thinner.

Dots of rust-colored oil paint, pulled down the surface with a little thinner on a brush, drew streaks from the chipped spots.

LifeColor paints act like liquid pigments and dry flat, so they are perfect to simulate rust on mufflers. I applied three shades for a layered appearance.

I brushed AK Interactive earth effects (AK-017) onto the lower hull and flat surfaces on top where the crew would walk. It doesn't need to be neat.

A thinner-dampened brush removed excess color and blended the dirt into the surface.

Exhausts

I installed the optional exhaust shrouds, but they were dull and needed life. I started with a layer of rust made from three LifeColor rust tones, **12**. I started with a thick coat of burned rust (UA907), followed by thin layers of corroded rust (UA908) and streaking rust (UA909).

Next, a layer of Ammo scratches effects chipping fluid (A.MIG-2010) was brushed on. After 30 minutes, I airbrushed the exhausts with the base-coat gray camo color, then immediately removed parts of it with water on a brush to expose the underlying rust.

Dirt, dust, and fluids

I airbrushed the underside of the vehicle with a thin layer of Tamiya JGSDF brown (XF-72), then hand-painted AK Interactive earth effects (AK-017) onto the horizontal surfaces as well as the bottom of the fenders, **13**. This was allowed to dry for 10 minutes before I blended it into the surface with a damp brush, **14**.

The wheels received a wash of earth effects. Then I airbrushed Ammo flat clear (A.MIG-089) to dull the shine. Dust-colored pigments, applied dry with an old brush, added more grime. Exhausts received a light dusting of Mig Productions rust (P025) and black smoke (P023) pigments.

I used a fine brush and AK Interactive engine oil enamel (AK-084) mixed with Humbrol thinner to add fluid spills on the engine deck.

Before attaching the wheels, I rubbed black pigment into the treads with my finger. I added all of the parts before polishing the metallic details with AK Interactive dark steel pigment (AK-086).

With all parts in place, the SdKfz is ready for the road.

Final thoughts

I learned a lot using black-and-white preshading, and the result is effective. Most importantly, I had fun! Experimenting with new techniques reinvigorates the creative juices. **FSM**

Build and paint Airfix's P-51D MUSTANG

Get a good-looking *Glamorous Glen III* in 1/72 scale

BY MASSIMO SANTAROSSA

Famous among one of the best-known aircraft of World War II was *Glamorous Glen III*, a P-51D Capt. Chuck Yeager named for his future bride, Glennis.

The North American P-51 Mustang: Need I say more? One of the most recognizable fighters of all time, it joins the Spitfire, Bf 109, and MiG-15 in the category of *iconic*. The Mustang has assumed kit form in all scales for decades longer than many of us can remember.

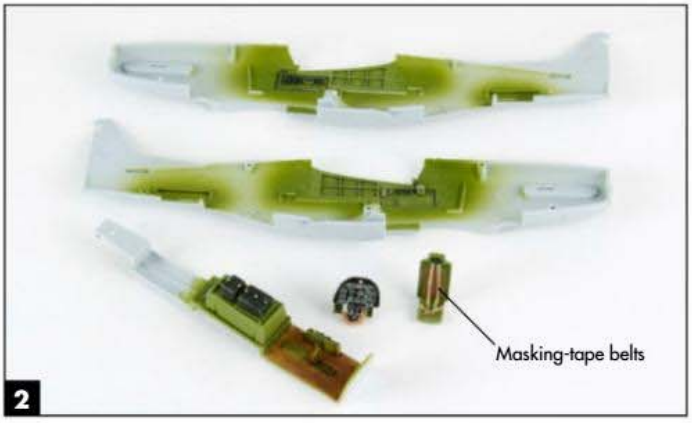
And Airfix: Need I say more? Founded in 1939 and producing kits for the mass market since 1952, Airfix has had its ups and downs over the decades. But Hornby's 2006 purchase of the company has brought a resurgence of the Airfix brand.

So it seems inevitable that these two classics would meet. Many rate Airfix's Mustangs (in two versions) among the best P-51s in 1/72 scale — manufactured to modern standards with an easy-to-paint canopy, correctly molded flaps, and a fairly detailed wheel well that goes all the way back to the wing spar.

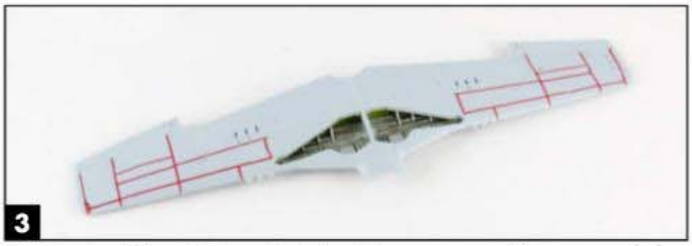
It's a fabulous model right out of the box. The decals are nice, too, but I chose an aftermarket sheet from BarracudaCals to model a plane flown by another worthy of the title of *icon* — war hero and aviation pioneer Chuck Yeager.

www.FineScale.com
Visit our website to see more aircraft flown by Chuck Yeager and modeled in *FSM*.

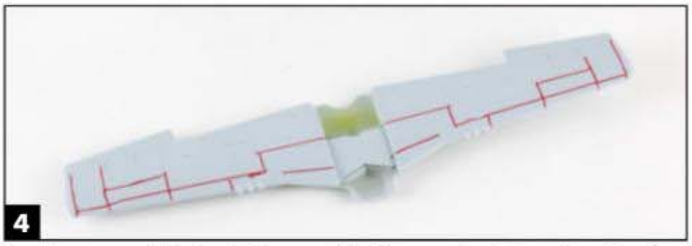
Cockpit detail stands out as a wash of dark artist's oils gives it more depth. Note the wood floor, standard in the P-51D.



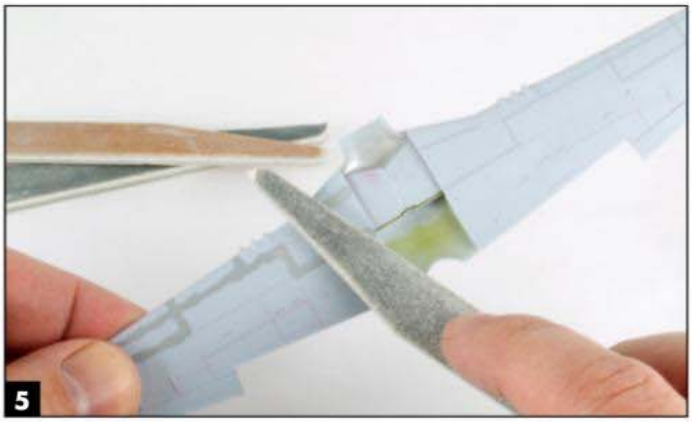
The only additions to the cockpit were strips of masking tape for seat belts. The canopy's size and clarity make any interior improvements worthwhile.



The wheel well has nicely molded detail that pops out with proper painting.



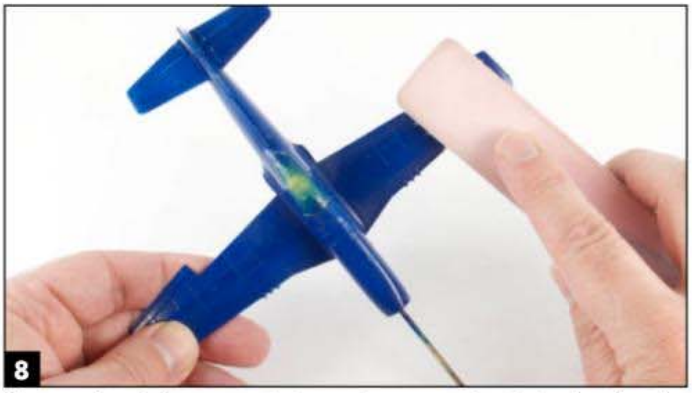
Panel seams on full-size P-51s were filled in to maintain the wings' laminar flow characteristics; here you see which lines need attention. (The filler would come out, however, and later Mustangs did away with it altogether.)



I filled the wings' panel lines with Mr. Surfacer and sanded them smooth using progressively finer sanding sticks. This needs to be done at least twice, because the filler shrinks a bit as it dries.

A good paint job begins with good preparation: After washing the model and rinsing it clean, I applied Polly S Plastic Prep to clean and smooth the plastic. (This product is now sold as Testors Plastic-Prep.)

Gloss black enamel is the usual primer for the Alclad II enamel I would use. But varying the shade of the base coat imparts different hues to the metallic top coats; I used Testors Model Master Ford & GM engine blue.

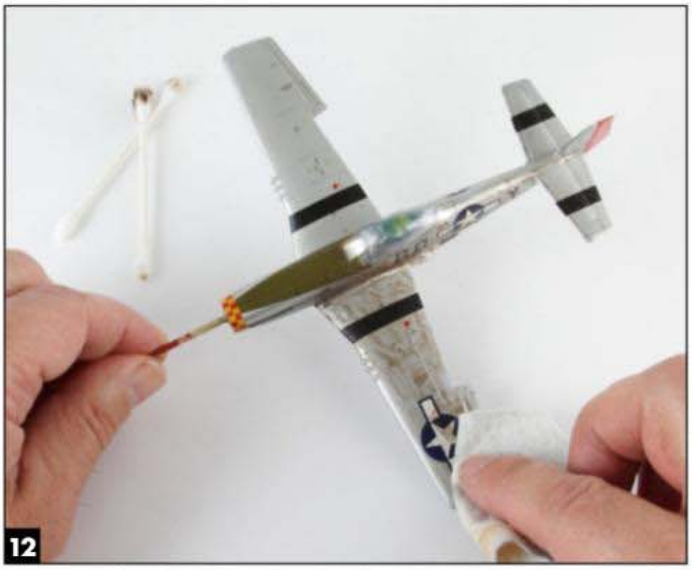


The smoother the base coat, the better the top coat. I waited a few days for the blue to cure, then polished and buffed it.

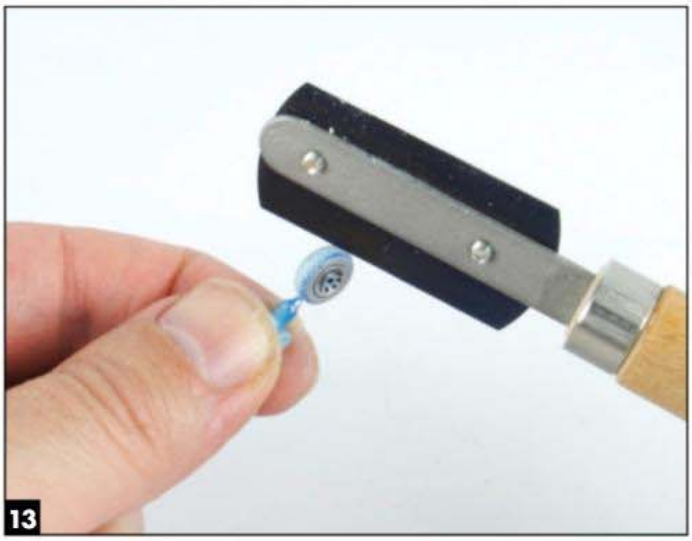
As if filling the panel seams weren't enough to worry about, P-51 wings were painted silver lacquer to further enhance airflow. I replicated this by adding a few drops of Model Master aircraft gray to Alclad II aluminum.

BarracudaCals produces an excellent sheet with markings for five Mustangs. The decals were terrific, especially the checkerboard that wrapped around the nose.

I sprayed the model with Pledge FloorCare Multi-Surface Finish to provide a gloss that would let washes flow. Then I schmeered on a wash of artist's oils mixed to the color of used motor oil.



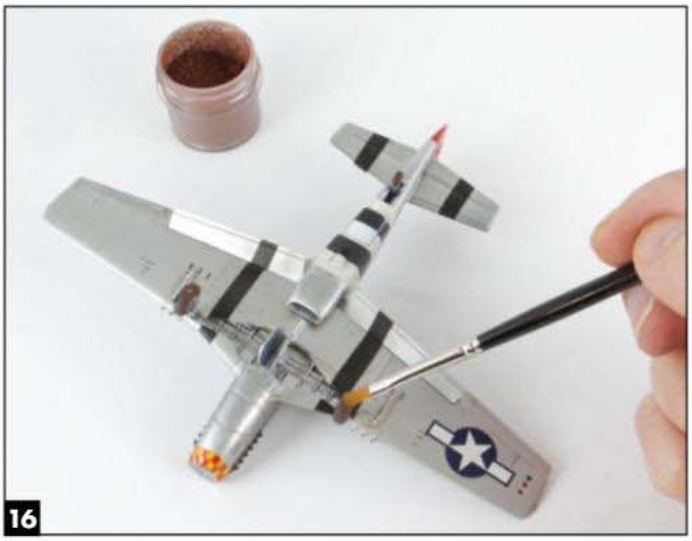
After sitting for a few hours, the oil wash was removed with cotton swabs and a dry, soft cloth. Wiping the oils away after they're dry leaves the color in panel lines and recesses and adds patina to broader surfaces.



The wheels were marred by a mold seam on the tires' crown; sanding it off erased some tread, but a razor saw quickly restored the pattern.

Some parts, such as the flaps, simply press-fit into place. I repaired badly bowed landing-gear struts by carefully bending them back to shape.

Small details, small brushes; smaller details, a sharpened cocktail stick — useful for tiny navigation lights and cockpit switches.



I gave the model a light spray of semigloss clear to slightly age the finish. Powdered pigments easily replicate exhaust stains, dirt, and dust. **FSM**

Contemporary kits have brought a greater degree of accuracy to the perennially popular Pershing tank — and just a few added details can make a Marine of Tamiya's tank.

Modeling a Korean War Pershing

Make Tamiya's 1/35 scale M26 one of the few, the proud • BY MIKE REAVES

I've always liked the M26 Pershing. It shares the aggressive look of the late-war German Panthers and Jagdpanthers while packing a 90mm M3 gun with a big honkin' muzzle brake.

I am particularly interested in the Pershing's service in Korea, where it really proved itself — so much so that I converted the old Lindberg M46 Patton into a Korean War M26 in U. S. Marine Corps service. That was long before the Dragon, HobbyBoss, and Tamiya kits. It involved major surgery and parts from Italeri's M47.

So, I was happy when Dragon produced its T26E3, M26A1, and M46 models in the mid-1990s. And I like the more-recent Tamiya M26. A club build was all the inspiration I needed to build another.

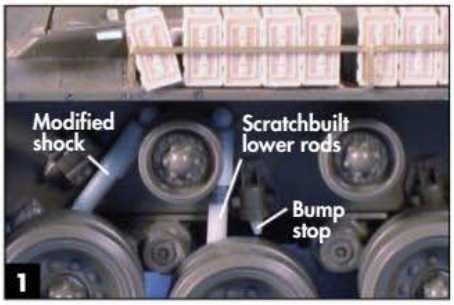
Lower hull and suspension

Tamiya surrendered some accuracy to accommodate a spring suspension by representing the shock absorbers without attachments to the torsion arms. Dragon did a better job of this, so I had some spare torsion arms to hack up for mounts. I still wound up scratchbuilding lower rods on the shocks. I removed locators from the torsion arms to position them.

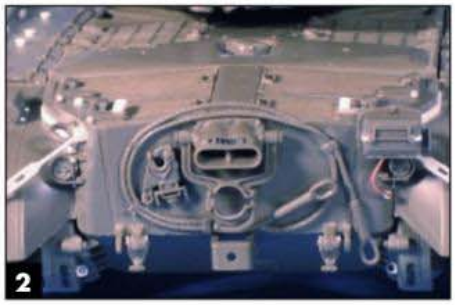
Similarly, Tamiya did not provide the ends of the bump stops attached to the lower hull sides. I swiped some of these from my spares box, but I still had to scratchbuild two with a punch and die to pop out concentric discs of sheet styrene, **1**.

There are casting numbers on the lower front and upper rear hull plates; I represented these with Archer "casting symbols," raised resin numbers suspended on decal film, **2**. I cut a .060" segment of styrene rod at a sharp angle and punched an oil filler plug from a piece of .020" sheet styrene.

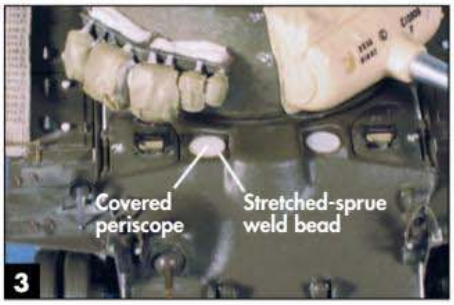
I added Friulmodel T81 metal tracks. They're tough to clean up, but they're well detailed and add real heft. I made connecting pins from .015" music wire. The tracks were left off until final assembly so I could paint and weather them separately.



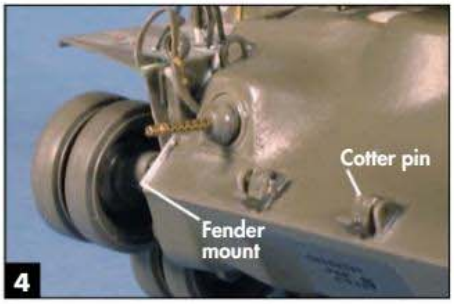
Dragon shock absorbers are modified to fit the Tamiya Pershing suspension; others are partially scratchbuilt. Bump stops are either spare parts or punched styrene discs.



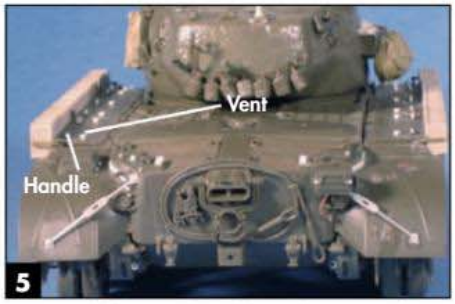
At the rear, white styrene shows fill plugs, mounting brackets, and other minor-but-missing details. The raised casting numbers are from Archer.



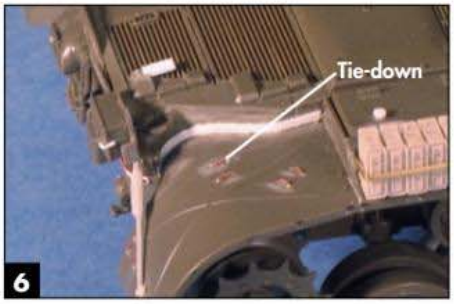
Inboard periscopes were plated over; stretched sprue replicates the weld beads that kept them that way.



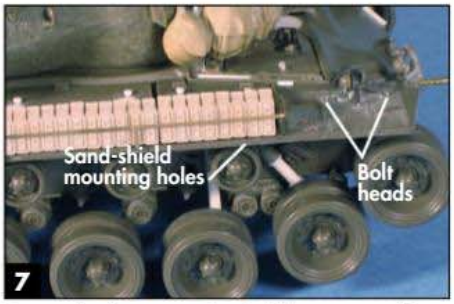
The brass gun barrel comes from Armorscale. Also note the strip styrene (with drilled holes) used as a mount for the missing fender. Styrene was used to add cotter pins to the clevises, too.



Tiger Model Designs handles and vents made from styrene discs dress up the toolboxes on either side of the tank.



Brass-wire tie-downs provide additional detail that could be used with stowed equipment topside.



Brass strips form a rack to hold ammo cans from Verlinden. Styrene bolt heads and holes drilled for sand shields bump up the detail.

A resin mantlet from Trakz received a .30-caliber machine-gun barrel out of the kit and an aluminum gun barrel from The Barrel Depot — and more raised markings from Archer.

A resin antenna base from Formations helped fine-tune the turret. A strand of coaxial-cable wire holds the canteens.

Upper hull

I wanted my tank to look like a well-worn veteran, so I thought it should be missing some pieces — including both front fenders. I thinned the fenders' front edges and added mounts made from styrene strip.

By the time of the Korean War, many Pershings' inboard periscope mounts for the drivers were plated over. I removed the periscope covers and used a paper punch to make two disks from .020" sheet styrene that I glued over the two spots, **3**, and surrounded them with weld beads made from stretched sprue. I drew the stretched sprue across the back of a hobby knife to curl it, making it easier to circle the covers. Brush guards over the outboard periscopes are from the kit; I thinned them a little before I glued them on.

Same goes for the kit's headlight guards, **4**. The horn got photo-etched guards and some wiring made from .010" solder. I added cotter pins to the towing clevises, mounted a brass .30-caliber bow machine gun from Armorscale, and drilled holes in the mounts for the missing fenders.

Vents on top of the fender-mounted toolboxes were actually mushroom shaped; I replaced the molded parts with concentric disks punched from sheet styrene, **5**. Molded handles on the toolboxes were replaced by Tiger Model Designs handles with photo-etched hasps.

On the aft fenders, snippets of brass wire replicated tie-downs, **6**. I used brass strips to make a couple of racks to hold .30- and .50-caliber ammo boxes, as seen on many Pershings in Korea, **7**.

Turret

I emphasized the turret's rough-cast texture by roughing it with a slow-speed, battery-powered grinder and a couple of different-size round diamond bits; a coating of liquid cement smoothed out peaks and burrs.

I used a Trakz M26 resin mantlet and added more Archer casting numbers. I bored out the barrel end of one of the kit's .30-caliber machine gun barrels and mounted it in the mantlet, **8**. Brass wire served for grab handles on the turret hatches. The resin antenna base is from Formations, **9**. I used a Barrel Depot aluminum barrel with the kit's muzzle brake, taking care to remove flash and seams from inside the muzzle brake, and added various packs and other equipment hung on the turret, including a string of canteens.

10 The base coat for this Pershing is Humbrol U.S. Marines green. Ammo boxes are painted olive drab, presenting a subtly different shade.

11 Liquitex Ceramic Stucco gel represents caked mud on fenders and running gear. Dry-brushed buff shows dirt and dust.

12 White glue forms lenses for the headlights, bright spots on the model as the shading and weathering becomes apparent.

13 Exposed film makes good glass for the cupola, but the turret's crown jewel is the .50-caliber Browning from Asuka Model (formerly Tasca).

Painting and weathering

I painted with Humbrol U.S. Marine Corps green and sealed it with Polly Scale flat clear once the enamel had thoroughly cured, **10**. Liquitex Ceramic Stucco gel added crusty mud to the lower hull, **11**.

After applying a coat of Pledge FloorCare Multi-Surface Finish, I laid down Archer's yellow markings and the kit's stars. Then I picked out mud clumps with Humbrol wood and applied a wash of equal parts Testors flat black and burnt umber enamel thinned with mineral spirits. Anyplace not heavily coated with dried mud was dry-brushed with Marine Corps green lightened with Humbrol wood. I also dry-brushed highlights using Humbrol wood lightened with radome tan or Naples yellow artist's oil.

I dusted the model with a light overspray of Polly Scale clear flat and a drop or two of Tamiya flat earth mixed with buff and thinned 50%, with just a couple of light passes on the top of the tank and perhaps five or six down low.

After priming the tracks, I painted them brown and black with a hint of green using Vallejo acrylics. A dark wash and selectively applied pinwashes of rust enamel deepened details. After dry-brushing with Humbrol wood, I sprayed the tracks with my dust mix. Finally, I caught high spots and depicted wear and bared metal with a Prismacolor metallic silver pencil.

And finally

I formed headlight lenses with white glue, **12**. Several light washes of acrylic buff added dust to corners and crannies, while exposed film negatives provided glass for the commander's periscope and cupola, **13**. A beautifully detailed .50-caliber machine gun from Tasca (now Asuka Model) tops off the turret. The groundwork is Celluclay scooped over contoured layers of cardboard to produce uneven terrain.

Tamiya's M26 is a good-looking Pershing straight from the box — and a few modifications transform it into a Korean War veteran. **FSM**

SOURCES

Casting numbers, markings, Archer Fine Transfers, www.archertransfers.com

.30-caliber Browning 1919A machine gun barrel, Part No. B35-064, Armorscale, www.armorscale.com

.50-caliber Browning machine gun and cradle, Part No. 35-L9, Asuka Model, tasca-shop.ocnk.net

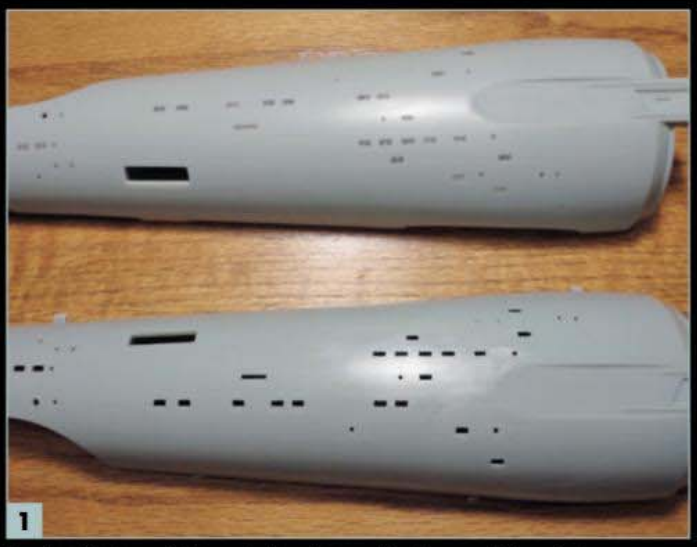
90mm M3 tank gun, Part No. BD35047, Barrel Depot (Trumpeter), available from The Barrel Store, www.thebarrelstore.com

M26 Pershing T81 tracks, Part No. ATL-77, Friulmodel, www. friulmodel.hu

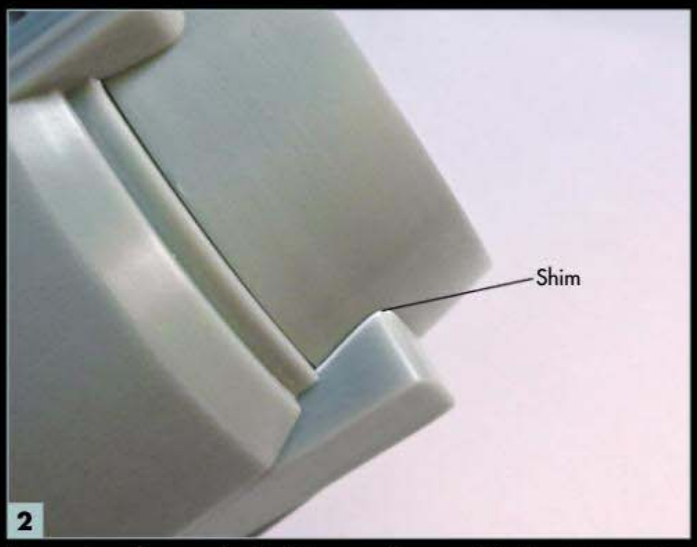
U.S. sponson box handles, Part No. 35-70021, Tiger Model Designs, www.newtmd.com

.30- and .50-caliber ammo boxes, Part No. 1194, Verlinden Productions, www.verlindenonline.com

Piloting TV's starship ENTERPRISE


1

The first filming miniature had no internal lighting, and the windows were represented by painted rectangles and circles. I filled all of the kit's windows with slow-setting super glue and sanded them flush.



2

Styrene shims improve the fit of the assembly around the front of Part 13, the sensor area at the bow of the secondary hull.

How to boldly, but easily, convert Polar Lights' 1/350 scale kit to the ship's initial version

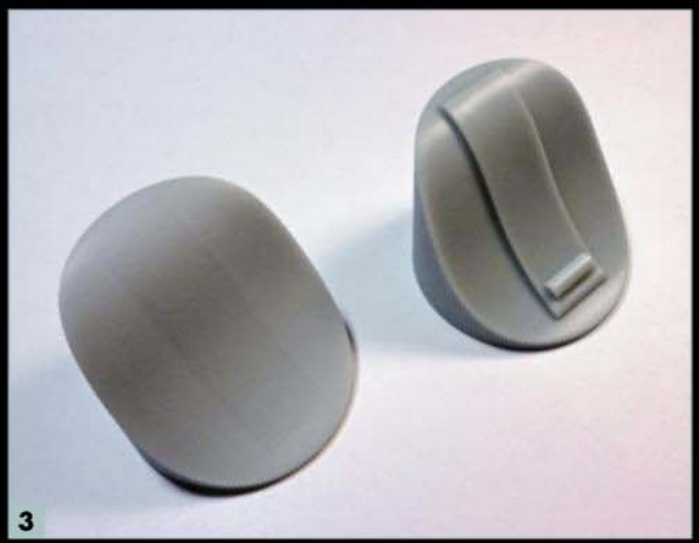
• BY PHILLIP GORE

Seek out more information

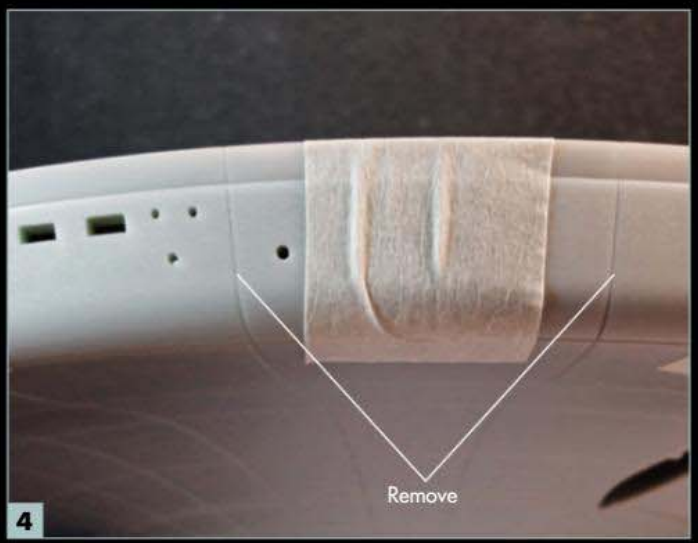
See more photos of Phillip's *Enterprise* and download a PDF of *FSM*'s "Intergalactic Color & Camouflage Special" on the famous ship at www.FineScale.com/OnlineExtras.

Polar Lights transported "Star Trek" modelers beyond happy with a 1/350 scale original-series USS *Enterprise*. It is big, fairly easy to assemble, and, most importantly, it is accurate. In addition to the ship, Polar Lights released an aftermarket lighting set, special decals, and several accessory sets.

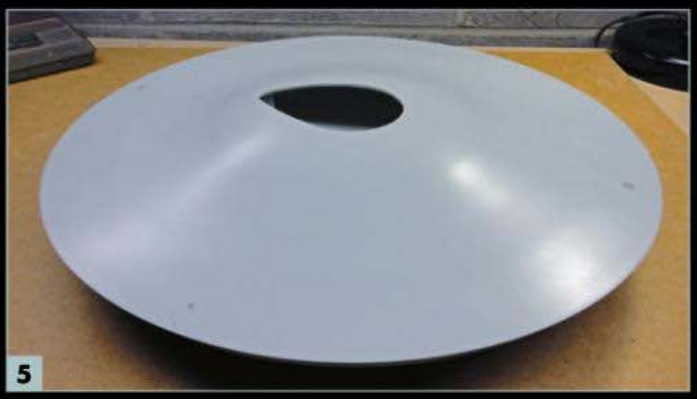
Having built several models of the *Enterprise* in its production configuration, I decided to build this kit as the 11' filming miniature shortly after it was completed in late December 1964. This version was used to film the first pilot episode, "The Cage," and is commonly referred to as the first-pilot configuration. (The filming miniature was subsequently modified for the second pilot, "Where No Man Has Gone Before," and again for the show's production run, which is what Polar Lights' kit represents out of the box.) The conversion to the first-pilot version doesn't require major surgery, just minor changes. All of the necessary bits can be found in the Supplemental Parts Pack (MKA004). This set also includes accurate decals for the first-pilot version.



To accurize the nacelle end caps (parts 50B), I removed their molded rectangular strips. The two raised bumps on each nacelle control reactor (parts 47) also were removed.



Polar Lights' engraved panel lines on the primary hull need to be removed because they were not seen on the first-pilot vessel.



I eliminated the lines with 150-grit sanding film, then smoothed scratches with progressively finer sandpaper. Super glue filled the light openings.

The lower half of the saucer section received the same sanding treatment. This was the least fun part of the project, requiring 38 *very* tedious hours.

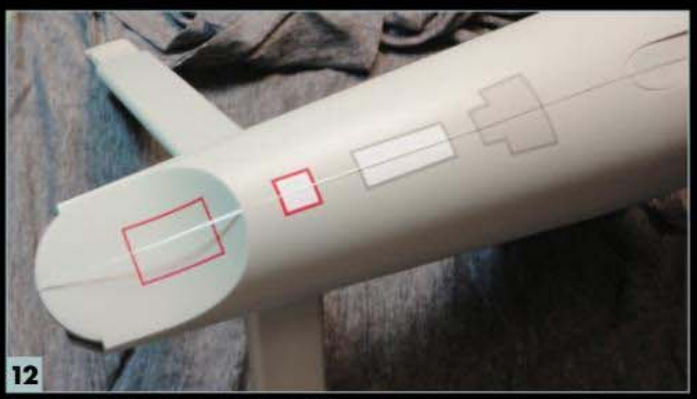
Once the grid was gone, I filled six incorrectly located light openings, sanded the super glue smooth, and drilled new ones at the correct spots.

Some of the running lights on the saucer had to be relocated after I filled the larger production-version light locations.

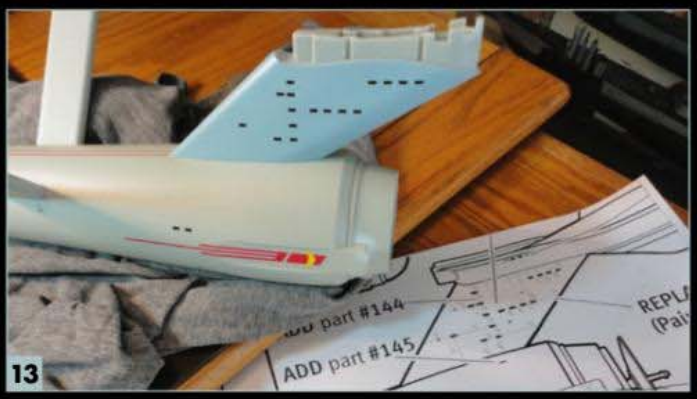
I mixed 5 parts Testors Model Master SAC bomber green, 41 parts Model Master light gray, and 31 parts Testors white (No. 1168) to paint the ship.

I sprayed the subassemblies with four coats, buffing between each layer with a soft cloth.

After painting the neck with Model Master USSR Flanker medium blue, I applied several coats of Pledge FloorCare Multi-Surface Finish. The light blue neck was unique to the first-pilot *Enterprise*.



To center decals, I stretched dental floss across the secondary hull and saucer subassemblies. Trimming most of the carrier film from the markings before application reduced the risk of silvering.



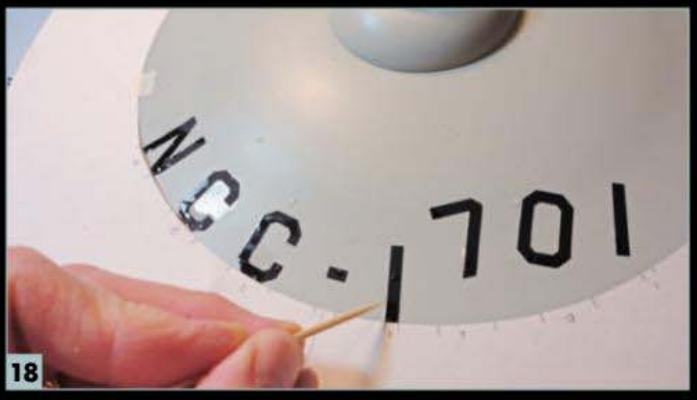
I enlarged the instructions to match the model and accurately measured the spacing and alignment of windows before I cut each from black decal.

I sealed the decals with several light layers of Testors Dullcote. I left the neck with a semigloss sheen to match the filming miniature.

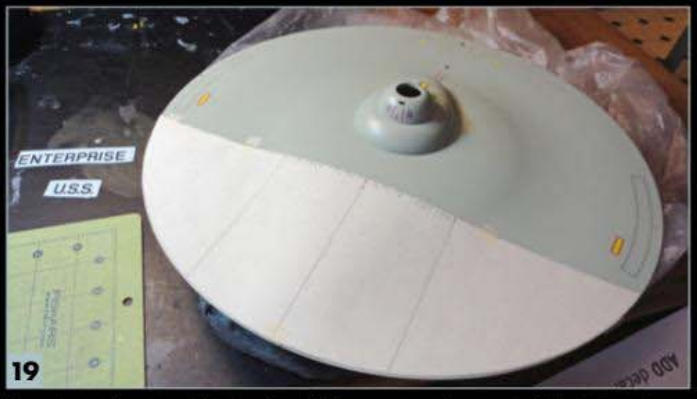
I attached the nacelles to the struts before adding details.

The supplemental kit's crystal-clear engine domes were painted dark red on the inside, giving them a high gloss.

I glued the enlarged instructions to heavy construction paper, making a template to place each character in the registry number on the saucer.



Taping the template on the hull made applying each number easy. I used a toothpick to fine-tune the locations.



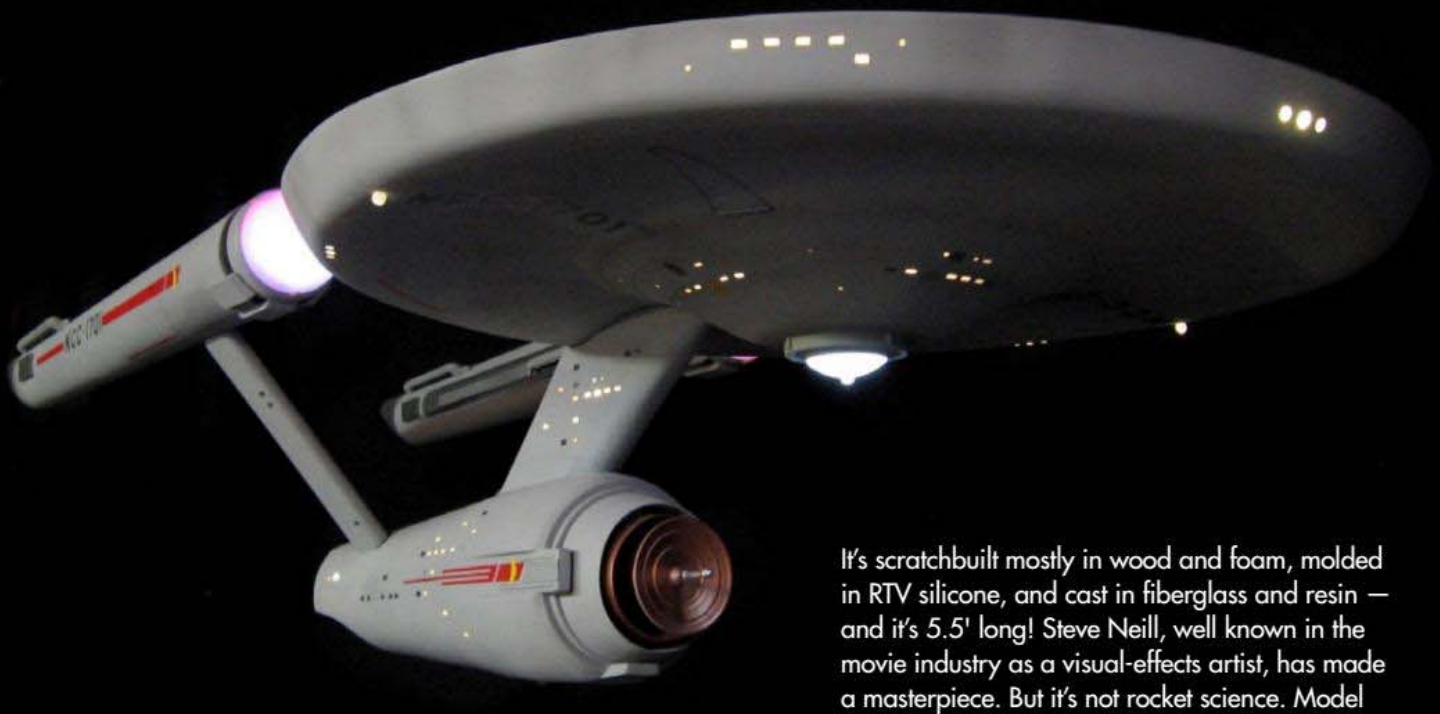
I made another template for the ship's name and separated the letters to minimize silvering.

Once all of the markings were on — a whopping 267 decals! — I airbrushed light coats of Testors Dullcote to knock down any remaining gloss. Finally, I attached the primary hull. **FSM**

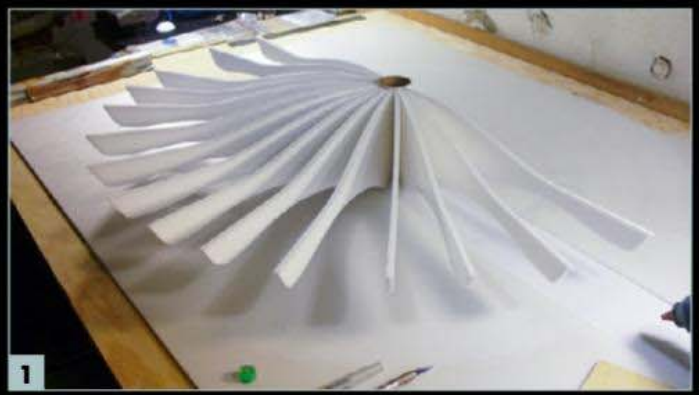
66" ENTERPRISE!

Steve Neill's 1/2 scale model of the original NCC-1701 is no small matter

BY MARK HEMBREE

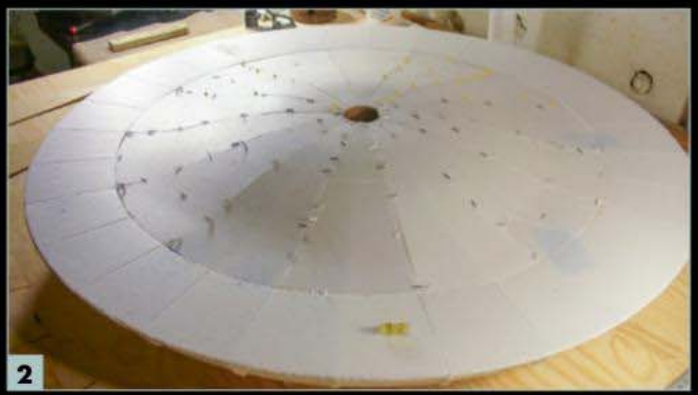


It's scratchbuilt mostly in wood and foam, molded in RTV silicone, and cast in fiberglass and resin — and it's 5.5' long! Steve Neill, well known in the movie industry as a visual-effects artist, has made a masterpiece. But it's not rocket science. Model aircraft fliers will recognize the materials and techniques he used to build a replica of the original series (aka TOS) "Star Trek" USS *Enterprise* 11' filming miniature displayed at the Smithsonian's National Air and Space Museum.



1

Steve's *Enterprise* begins with 28 ribs of Depron foam, often used for R/C aircraft. A hub centers the construction and comes in handy later, too.



2

Sheets at the circumference lock the ribs at the edges. Formed foam sheets cover each section, tacked in place with white glue and dressmaker's pins. This construction is repeated underneath.

Micro-Fill balsa filler smooths the seams before Steve applies 4-ounce fiberglass cloth …

… and follows with a saturating coat of epoxy resin. "This layer is what gives it strength," Steve says. "And the cross section is absolutely in scale to the one in the Smithsonian, based on Gary Kerr's plans."

Evercoat Metal Glaze, a two-part polyester blending and finishing putty, "is the resin car-body guys use after they use Bondo," Steve says, "but it sands and carves much easier, and thins down at a much nicer rate."

A rib template attached to a brass-tube arm checks the contour. Steve says this method "is not too different from the original. They put plaster on a Lazy Susan and turned it until they had the shape, then sanded it. Then they used the plaster form to vacuum-form the upper and lower hull."

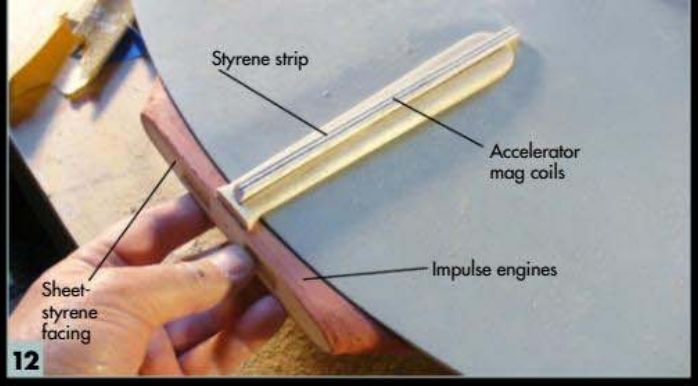
Two-part air-curing Bondo spot putty dapples the surface. Steve says, "I do it over and over until you can't see or feel any more problems. Then the primer comes."

Steve applies more Evercoat, "because the saucer edge just wasn't quite perfectly round. It's really hard to do." Blue painter's tape helps set the edge, which is sharper and much more uniform after this step.

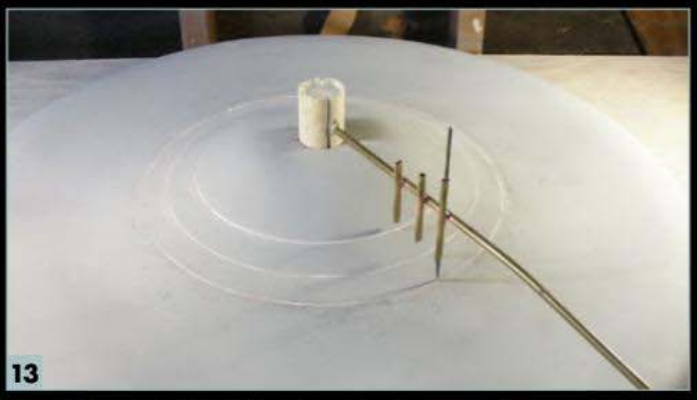
Turning to the command superstructure, Steve taped a scaled plan copy to a balsa block and roughed out the shape with a band saw.

He used a contour gauge and doggedly sanded the balsa to shape. "I'm a sculptor," he says, "so I have an eye for contours. Doing it this way drove some of my friends nuts, though."

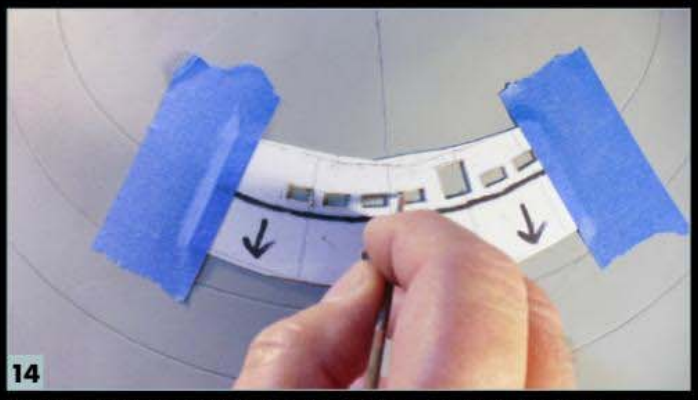
Steve attached balsa to a drill press, sandpaper to a contour gauge, and spun out the bridge module. "A couple of weeks later I went out and got a lathe," he says.



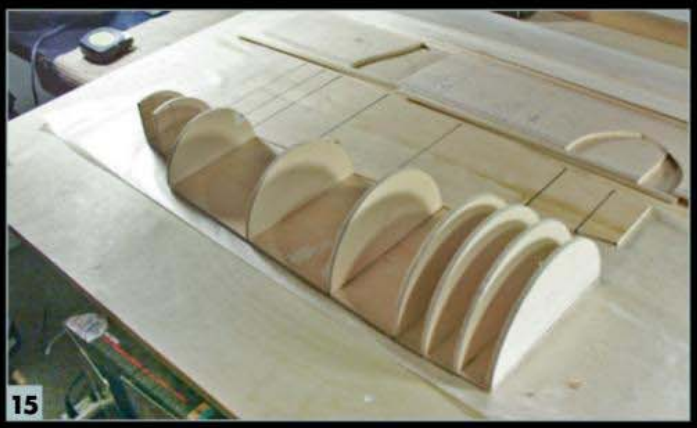
Shaped wood and a sheet-styrene facing serve for the impulse engines and accelerator mag coils. "No 3-D printers here," Steve says.



The hub and brass tubing form a beam compass to scribe lines and accurately place other features; a sharp rattail file does the circular scribing. "It's a crude rig, but it worked like gangbusters," Steve says.

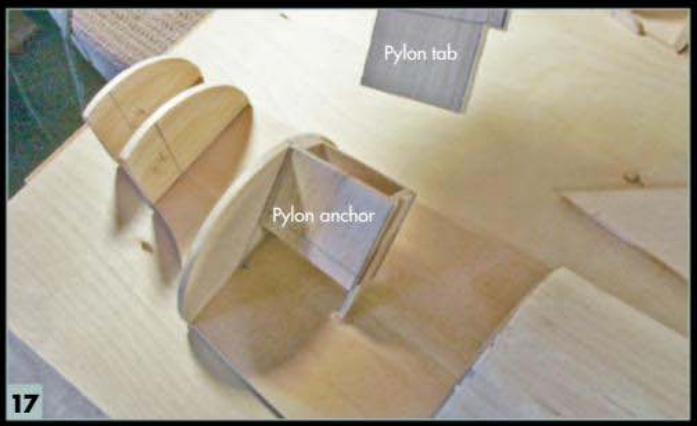


Scribing windows and bays from Kerr's plans; the black line matches the scribed line underneath, showing the template is on course. As on the original TV model, radial lines are penciled, not scribed.

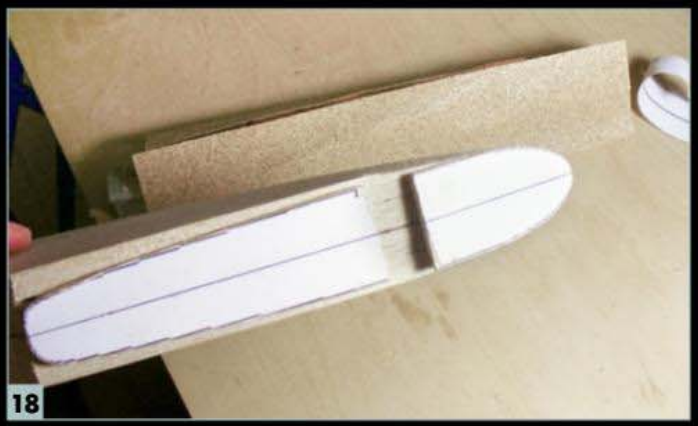


Steve used the plans to profile the engineering section in halves, and a scroll saw to cut formers from model-aircraft plywood.

Ammonia water makes wood sheet pliable for the assembly's skin. Then Steve wraps rubber bands around and lets the wood dry to shape.



Steve built a firm anchor for tabs on the nacelle pylons to ensure they were angled correctly and would not sag. He sanded the pylons to shape.

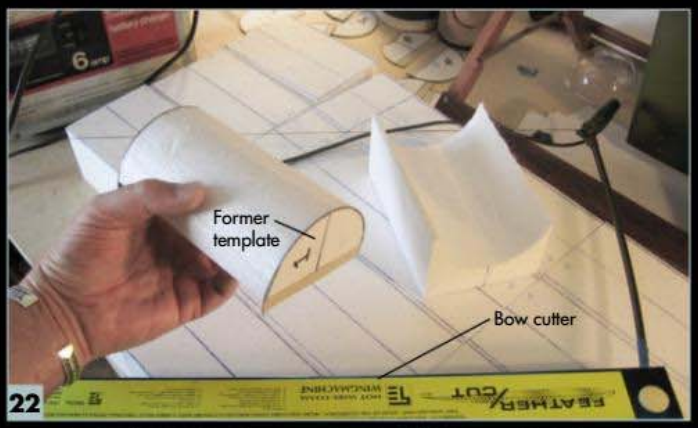


More templates, more sanding as Steve shapes halves of the hull-connecting pylon.

Ribs on the shuttle bay door are blue painter's tape. After multiple coats of primer, removing the tape left grooves to replicate the bay door.

Ammonia water, rubber bands, and a little heat provide persuasion as balsa is formed into the deflector's concentric rings.

After trying wood, Steve switched to plastic foam for the engine nacelles. The foam is sectioned according to the plans …



… and cut to form with a Wingmachine hot-wire bow cutter. Steve cut the formers in cardboard and stiffened them with a coat of super glue.

The mag-flow shielding cowl (aft end of nacelle) is shaped wood wrapped in ribbed sheet styrene with rings of styrene on the end. The wood ball came from Kit Kraft, a hobby retail fixture in Studio City, Calif., since 1946.

Steve covered the nacelles with 3M Super 77 spray adhesive and applied fine fiberglass cloth, then coated it with epoxy resin, primed, puttied, and sanded smooth.

25

Various styrene structural stock was used for intercooler details. Later, these areas would receive photo-etched grilles.

26

Firing up his new lathe, Steve turned a deflector dish and its horn from hardwood. He says, "There was no way I was going to turn these parts on a drill press!"

27

Go time: Steve pours RTV silicone over the lower half of the saucer to make the first of many molds. The mold flask is water-based sculptor's clay.

28

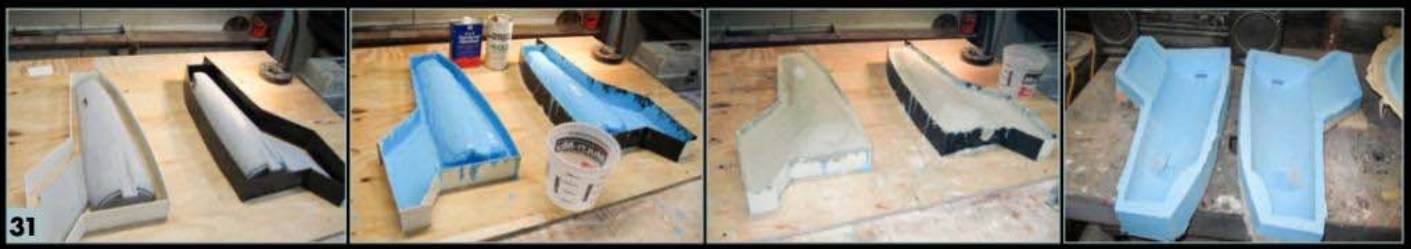
UltraCal 30, a fast-acting gypsum cement, gives the big silicone mold rigidity. "We use it for making molds in creature shops," Steve says. "It's much harder than plaster." He reinforces it with burlap fiber; wood staves are embedded to make the mold easier to handle.

29

Into the saucer molds go a gel coat of epoxy resin (tinted black to block light), a layer of fine fiberglass cloth, and fiberglass mat. "It's not the prettiest thing in the world, but we won't be looking at this side," Steve says.

30

Shaped plywood cross members reinforce the saucer as well as the connection to the hull connector.



31

The engineering hull and the hull connector halves are consolidated and placed in mold flasks made from thick styrene sheet. Then RTV silicone is poured, followed by UltraCal 30 to keep the silicone molds from flexing. Finally, the molds are ready to receive resin and fiberglass.

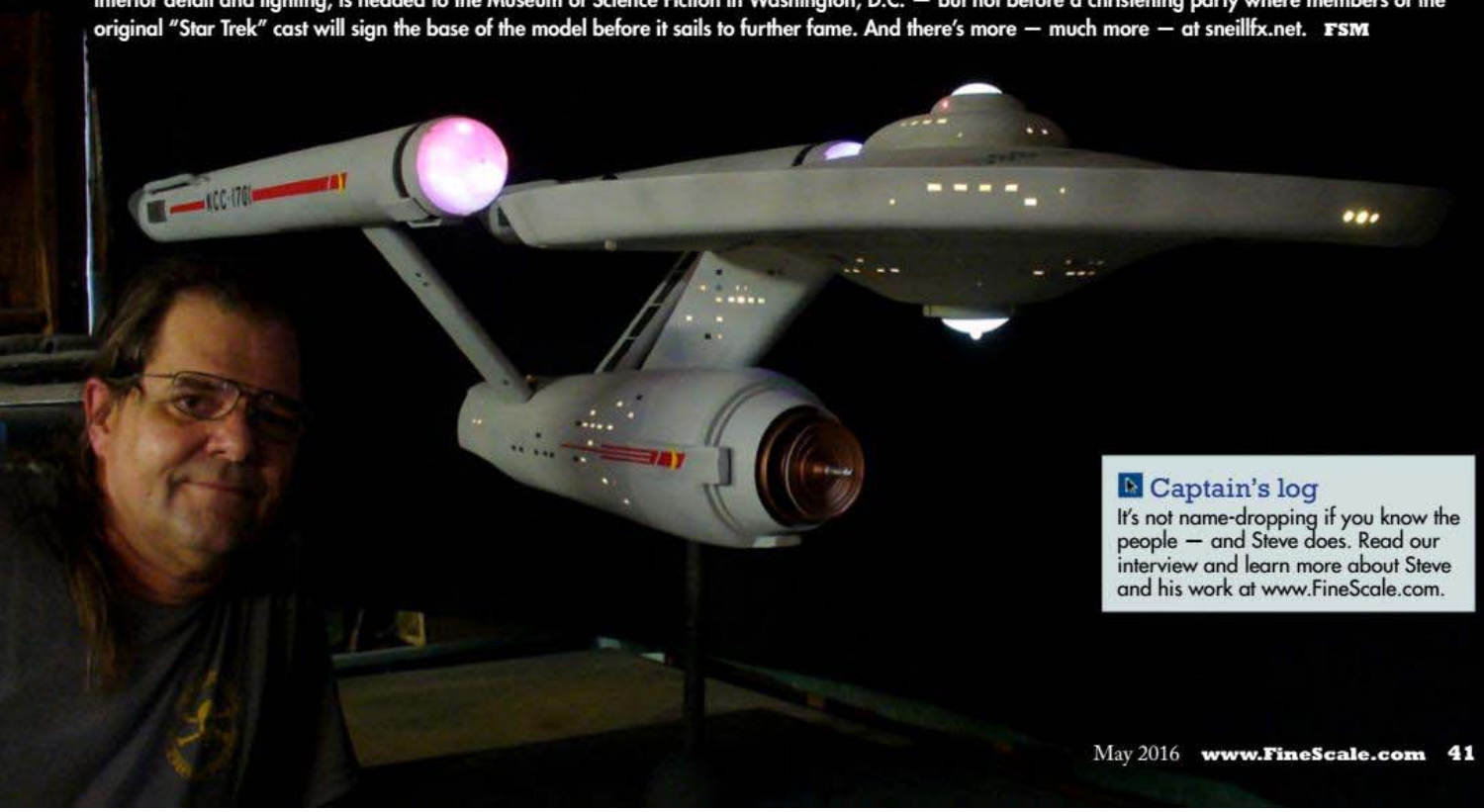
Plywood stiffens the engineering hull and connector. Steve will cut channels to allow electrical wiring to pass through.

He used the molds to cast smaller parts in white Alumilite casting resin, rather than fiberglass.

The hull color is a 2:1 mix of Testors Model Master Acryl paints, flat white (4769) and light ghost gray (4762), respectively. Windows are filled with acrylic dental resin, which glows more realistically than clear parts.

Bussard collectors on the TV model "had Christmas tree lights and broken pieces of glass," Steve says. "I used aluminum foil and blinking green, blue, red, and yellow lights. I have 12-volt gear motors that can revolve at 60 rpm or slower, depending on the power supplied. They turn very smoothly and make a lot less noise."

At the end of a years-long mission, Steve's *Enterprise* has a permanent place of honor in his home. Another, produced from the same molds but with interior detail and lighting, is headed to the Museum of Science Fiction in Washington, D.C. — but not before a christening party where members of the original "Star Trek" cast will sign the base of the model before it sails to further fame. And there's more — much more — at sneillfx.net. **FSM**



Captain's log

It's not name-dropping if you know the people — and Steve does. Read our interview and learn more about Steve and his work at www.FineScale.com.

▲ **RICCARDO MERLONI**
PESARO, ITALY
Riccardo arrived at an M1A2 SEP Abrams TUSK II by adding a DEF Model detail set to Tamiya's 1/35 scale kit. He also added photo-etchings from Voyager. The Abrams is painted with Tamiya acrylic colors and parked on a base from Phoenix. Riccardo says, "The M1A2 SEP Abrams TUSK II is truly a fortress."

▼ **PAULO AYRES MUSELLI de MENDONCA**
PORTO TROMBETAS, PARÁ, BRAZIL
Preceding its more-famous Camel in combat was Sopwith's triplane, which left active service in 1917. Paulo says Wingnut Wings' 1/32 scale model is "a wonderful kit with perfect fits, impeccable molding, and beautiful decals by Cartograf." However, he recommends it "only for experienced modelers, as it will not tolerate errors in the assembly."

MICHAEL TAYLOR
VAN WERT, OHIO
Citing the film "Why We Fight" as a reference, Michael marked Accurate Miniatures' 1/48 scale SB2U-3 Vindicator for U.S. Marine Corps VMSB-241. He says, "The film showed a half dozen or so Vindicators taking off from Midway. Most have the smaller insignia, but two have this large insignia on the wing." He painted it with Testors Model Master colors.

▲ ALFONSO PEREIRA
PORTLAND, OREGON
Checking in from the Maschinen Krieger universe, Alfonso brings us a 1/20 scale S.A.F.S. Fireball SG armored spacesuit made by Wave. He sculpted joint covers with Aves putty and replaced the styrene antenna with a needle for a more in-scale appearance. The base is an upside-down tuna can sprayed with textured paint.

▲ GLENN THORN
MOORESTOWN, NEW JERSEY
With an aim straight and true, Glenn built Pegaso Models' 90mm (1/20 scale) Samurai Warrior, painted it with Vallejo acrylic colors, and placed it on a Scott Durling custom wood base. Glenn says, "The figure took 50 part-time days to complete and proved to be an experiment in violet."

Re-creating a RUST BUCKET

Modeling to reflect a real, rotting '97 Chevy S10 in 1/25 scale • BY KARL LOGAN

Above: Showroom spiffy? No way! This pickup was modeled to look like its real-life cousin, which lived through many a New York winter.

Left: Karl Logan drove his 1997 Chevy S10 pickup for years and, despite its rust and beater look, loved it enough to model it.

Anyone who has ever modeled anything automotive has, at some time, wanted to build his or her own personal vehicle. I was lucky — a model of the 1995 Chevy S10 was available from AMT, **1**.

Though I drove a 1997 S10, the kit was close enough to embark on a fun project to re-create my beloved rust bucket.

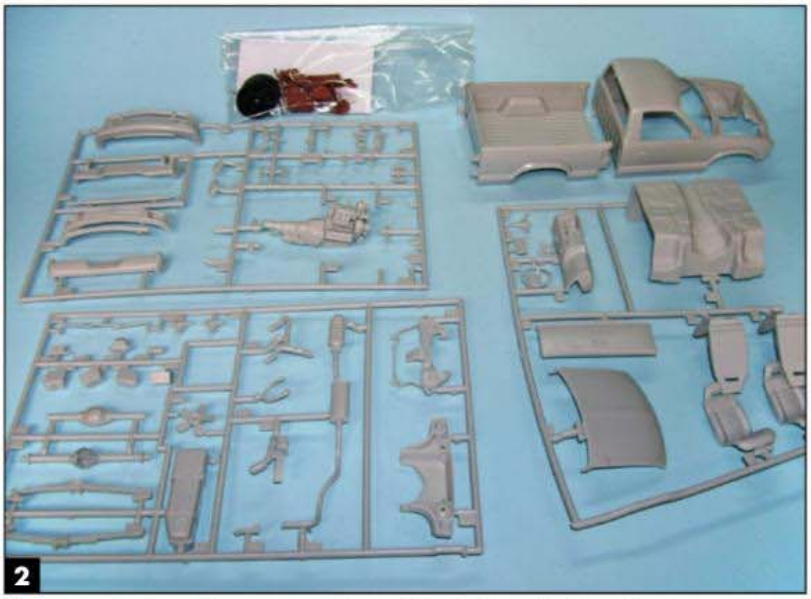
The kit allows you to build the SS version, or the LS, like my S10. Unfortunately, the kit's engine is not an exact match. But I wasn't too worried about it; the exterior was my main focus. I wanted to finish the model in the configuration and condition in which it spent much of the New York summer — as a well-used carrier for my Suzuki dirt bike, which I race off-road. This meant applying a lot of my armor weathering skills.

Building the beast, with tweaks

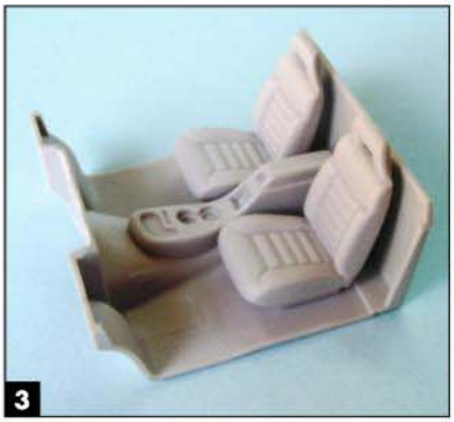
First I studied the instructions and kit pieces to see what needed to be changed or

1

I started with AMT's kit of the 1995 Chevy S10.


2

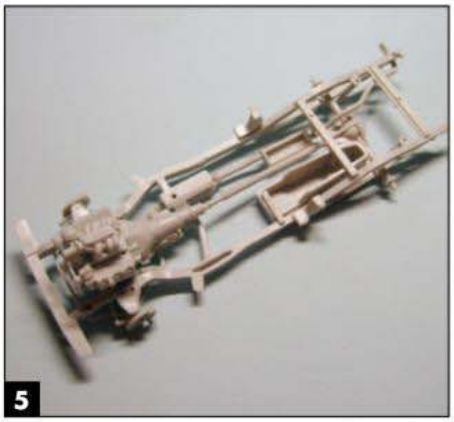
A quick study of the kit's parts let me know I'd be doing a lot of modification.


3

The console didn't look like mine, so I started the modifications here.

4

Milliput Fine White 2-part epoxy putty helped me form a new console and cup holders.


5

No mods were needed on the frame and basic engine, but under-hood fixes would follow.

scratchbuilt, **2**. I realized early on that some modifications were necessary.

The first hiccup came with the console. My truck had a large, hollow armrest and abbreviated cup holder between the seats; the kit's was like a sports car's console, **3**.

I used Milliput Fine White 2-part putty to form a suitable replacement. After cutting out the cup holders, I molded the putty around them to complete the shape, **4**.

The frame and engine were built without modification until after the painting, when additional detail would be added as the frame became integral to the area, **5**.

Before I went further, and while working with the putty, I decided to fashion the rolled-up tonneau cover on the truck's bed. I rolled out the putty with a rolling pin, and after measuring the width of the bed, cut a piece to match the size, then rolled and folded it exactly as I do on my truck.

After the putty cured, I used lead foil to simulate the Velcro strips that secure it on the bed. I also added metal fastening snaps by cutting a piece of .040" rod into tiny discs with a single-edge razor blade.

While concentrating on the cover, I tackled the bed's tonneau mounting rails by adding two .040" strips along the bed's top. I also had to add the same snaps along this top to correspond with the ones on the cover. The rails are held on by two C-type clamps; I built these out of .030" x .030" styrene square rods, **6**. To complete the bed, I added four small metal tie-down loops on the inner walls.

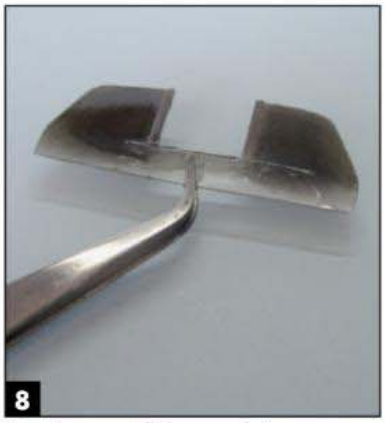
With the tonneau and its attachments figured out, I returned to the truck's interior, scratchbuilding window handles and sun visors from two .060" pieces of styrene cut from a larger blank. Over the driver's visor, I added a folded metal foil "document folder" like on my real visor —insurance, registration, etc. On the other, I added a small clip to hold sunglasses, then added a photo-etched pair from Detail Master. On the inner roof, I fashioned two grab handles, **7**.

Next I had to modify the rear window, which is a three-piece, split window that

6

With the putty out, I jumped ahead to make the rolled-up tonneau cover for the bed. I also fashioned mounting rails and C-clamps from styrene.

Styrene visors and grab handles plus photo-etched sunglasses personalized the truck to match the original.



Creating a realistic rear window starts with cutting two pieces of clear styrene, leaving space in the middle to model an open sliding section.

After assembling the interior I cut more styrene strips to scratchbuild seat belts for the truck.

A molding around the truck's exterior was particular to the SS model, so I sanded it off with emery boards to match my S10.

With my motor tool, I thinned plastic until you could almost see through it. This was preparation for creating rusted-through spots.

opens in the middle, **8**. The kit's rear window was about 2mm thick, and would not be easily modified. So I cut one out of thin, clear styrene in a way that left the window open. I added two pieces of .010" x .040" styrene to make the frame.

Next, I assembled the interior — seats, dash, pedals, and a couple of scratchbuilt seatbelt receptacles out of a thick styrene strip. A rearview mirror was scratchbuilt from styrene rod and strip, and Bare-Metal Foil used for the reflective surface, **9**.

The AMT kit's body and cab include molding around the truck, **10**. This was unique to SS models, so I removed the molding using emery boards.

Next, it was time to model the characteristic body rot under the pillars — common on older pickups.

Working from the real thing, I used my motor tool with a ball-shaped, high-speed cutting bit and laid into the plastic, thinning it until it was almost translucent, **11**. Stabbing and cutting at the thin plastic with the point of an old No. 11 blade, I made two ragged, "rusted" holes on either side of the pillars, **12**. I also abraded and degraded the lower body's edges for good measure, as the road salt used in New York winters really eats up the undersides!

Painting and severe weathering

I sprayed the body with Tamiya Fine White Surface Primer, my favorite. After it dried, I applied a few coats of Tamiya pure white straight from the spray can. I was pleasantly surprised at how easily this combination resulted in an acceptable, high-gloss finish, **13**. Setting the body aside to dry, I turned to the interior.

I always color interior components separately. First, I painted the interior floor flat black using craft acrylics. While the paint was wet, I liberally sprinkled black flocking onto the surface and gently pressed it into place with a wide brush to secure it.

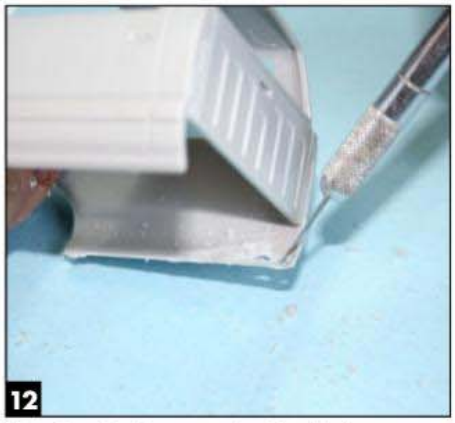
The seats, console, and dash were painted separately. To replicate my seats' fabric pattern, I mixed a light gray color, gave it an overall wash of darker gray oil paints, and then, after it dried, I used a combination of white and black oil paint to dry-brush diagonal streaks onto the seats, making a decent approximation of my truck's fabric pattern, **14**.

After letting this dry for two days, I gave a final pinwash to the seams using the same dark gray oil mix. A pinwash is a detailing wash applied with a fine brush only to specific joints and seams to darken them, as opposed to a general wash that can tint the entire surface.

The dash and tub walls were painted a combination of dark grays, including Model Master panzer gray. I used craft acrylic tans, white, and black to tint those basic shades and give slight variations in tone. I usually paint in this manner, by using basic tones and established colors, but modifying them in lightness or darkness. This not only adds variety, as in real life, but creates some dynamic tonal elements.

After adding floor mats cut from fine black 600-grit sandpaper, I set about weathering the interior with Mig weathering pigments. Here's where my armor modeling roots were helpful.

These finely ground paint pigments are perfect for realistic weathering applications in any genre. They can be applied with an old paintbrush and set in place by applying a drop of thinner. I use Mig Pigment Fixer, which is specially formulated to seal the pigments. However, as I was applying them



Next, I stabbed away at the thin plastic to create corroded holes that replicate the look of my aging rust bucket.

Next, I base-coated the truck's body with Tamiya Fine White Surface Primer, then painted it Tamiya pure white so it would be ready for the interior.

To upholster the seats, I painted them light gray, then added a wash of dark gray oil paint, followed by white and black oil-paint streaks.

I used my armor modeling skills to weather the frame, starting with Mig weathering pigments.

After painting the frame and engine I gave it two washes — one black, one orange-brown rust.

Dry-brushing silver on the darker pieces added highlights to the frame and engine.

over the flocking, the fibers "grabbed" the pigments and I didn't need to seal them.

I used a combination of colors, including dry mud, industrial earth, and old rust, to create the proper effect. I also dusted the dash with dry mud to mimic the dusty condition of my truck's interior — I'm not one of those "buff and shine" guys!

To finish it, I built my cassette box out of Milliput and added various letters, and maps from Verlinden military accessories.

The cab's interior was painted to match the interior tub, using the same combination of paints. I masked the windows and airbrushed a base coat, lightened it with some tans and whites, and shot a few light coats to fade the color. I then painted the details, brush-painting the wheel wells and trim in semigloss black.

The rear window was airbrushed with Tamiya smoke (X19), which is perfect for tinting windows. After it dried, I dipped it and the windshield into a small bowl of Pledge FloorCare Multi-Surface Finish (PFM), which is a great way to make model car windows more transparent. I attached the rear window and the windshield with white craft glue.

Next, I weathered the frame and engine — key to creating the right look to mimic my New York rust bucket!

I used a combination of oil washes and Mig weathering pigments mixed with Mig acrylic resin, a thick base into which one can mix pigments as well as plaster, real dirt — any weathering medium — and which hardens after it cures, usually in less than 30 minutes, **15**.

To start, I painted the frame and engine using Tamiya black (X-1), metallic gray (XF-56), flat aluminum (XF-16), and gunmetal (X-10). I gave the engine and frame two artist's oil washes: one an orange-brown rust color, and one black on the silver-painted parts only. I also dry-brushed highlights of brighter silver on the darker pieces, **16** and **17**.

At this point, I would stop if modeling a "clean" model. This one wasn't to be clean.

To weather the undercarriage convincingly, I used Mig's acrylic resin and pigments. When applying acrylic resin as "mud" to my armor models, I mix a batch consisting of real dirt, pigment for color tinting, and plaster thrown in for bulk. Then I apply the uniformly colored glop to a tank's tracks and wheels.

However, I wanted more variety and control, so I started by adding untinted resin straight onto the frame and engine, then applied various pigments to the resin, stippling and adding more variety as I went. I used Mig's rubble dust (No. 234), dark mud (No. 033), old rust (No. 230), and ashes white (No. 022) to create the effect of road salt, and black smoke (No. 023) for shadows, **18**. For the gas tank, I applied the pigments to natural steel paint, mixing it into the color, **19** and **20**.

This gave me a lighter ratio of pigment/paint, and a more-subtle outcome while still imparting grain to the degradation. I kept adding colors until I got the effect I wanted, a whitish hue on top of the rust/dirt colors. Then I let the chassis dry, **21**.

I freed the wheel hubs of chrome by immersing them in bleach, which usually strips plating in about 30 minutes. After thoroughly washing the parts, I painted them black, then weathered by applying a wash of orange and raw umber artist's oils and a final application of Mig old rust and fresh rust (No. 416) weathering pigments, as I'd used earlier.

I sanded the tires with an emery board to make them look used. After joining the tires and hubs, the wheels were mounted to

18

To really nail the gloppy undercarriage, I started with untinted resin, then applied various pigments.

19

For the gas tank, the addition of pigments to steel paint looked great.

20

A mixture of pigments, including Mig ashes white, replicated the film that road salt leaves under vehicles.

21

Once all the colors were added and I was happy with the frame and drivetrain, I set it aside to dry.

22

Wheel hubs were stripped and repainted. After assembly, the tires were sanded and given a tan oil wash, and dabbed with dry mud pigments.

23

I made engine hoses from solder, then made the S10's odd spider-like distributor and painted fluid containers under the hood.

24

I dipped foam into a mix of black, steel, and raw umber oil paint to simulate body chips and as the basis for rust spots on the bed's underside.

the frame and given a tan oil wash and a dusting of Mig dry mud pigments, **22**.

The engine got additional hoses made from thin solder, as well as battery wires and brake reservoir lines made from wire. I also built the truck's weird, spider-like distributor, **23**.

The washer fluid reservoir and radiator overflow tank were painted flat white, with bottoms painted aqua blue and light green, respectively, using craft acrylics to simulate fluids.

The hood's underside was painted panzer gray, then streaked with a dirty white and tan oil paint for a worn look.

The pristine white body was given a light wash of a dirty tan oil paint mix — white, raw umber, and a dab of yellow — then a light wash of rust on the chassis and rear bumper.

I dipped a small piece of packing foam in metallic brown artist's oils, a mix of black, metallic gray, and raw umber. I dabbed the foam against the body to simulate chips from road debris on the bottom of the body and bed, **24**.

I dabbed orange and raw umber oil paints on the patches of rust at the base of the pillars. The nice thing about using the oil paint is that you can just remove part of it if you feel that too much has transferred to the model.

The truck's bed was similarly weathered, the only extra step being the application of some real dirt and Mig pigments to simulate the dirt that accumulates in it from my bike, **25**. On the rear window and tailgate I hand-painted current stickers and remnants of old bumper stickers on my real truck.

I cut mud flaps from .010" styrene and glued them to the wheel wells.

Next, the hood: I added a circle of styrene, drilled a hole, and inserted .032-gauge guitar string (A) for an antenna. After cutting it to the proper length, I stripped the outer winding, leaving about ⅛" to simulate a spring base.

It's not perfect, but it looks convincing!

25

I attached body and chassis, then treated the bed to the same foam, paint, and rust treatment to create and enhance the dirty look.

26

The bike is cast metal and plastic, but I took it apart to repaint and weather it, and added my own graphics by hand.

27

With the bike super glued in the bed and tie-downs in place, I made a ramp of balsa wood and positioned it next to the bike.

The final result I was after: a rust-bucket Chevy S10 that looks like a midsummer version of mine, inside and out, including my well-used dirt bike in the bed.

The bike was a cast-metal and plastic model, **26**. It was red, but I disassembled it and painted the appropriate parts yellow using a Tamiya spray can. After reassembling it, I added cables and carefully painted details. I applied graphics by hand, including sponsor decals, then used spare decals to add my racing number, *128*. I added a dirty brown wash and some Mig pigments to create a dirty, post-race bike.

Tie-down straps were made from bent wire and strips of lead foil cut from wine bottles.

I mounted the bike in the bed with super glue and attached the appropriate hooks and tie-downs, as I would in real life. After adding a tire to the bed where I normally carry a full-size spare, I fashioned a loading ramp from balsa wood, with a plastic lip that I painted aluminum; it looks just like my ramp did, **27**.

This was a nice change of pace from my usual armor subjects, and a lot of fun to build. A fender bender consigned my New York rust monster to the junkyard — but this model is a fine homage to a reliable truck that carried me to dozens of off-road adventures. I miss my truck, but it will live forever in my display case! **FSM**

TURBOPROPS for a DC-3

Converting Minicraft's 1/144 scale airliner to a Basler BT-67 • BY CARL KNABLE

Like Basler Turbo Conversions in Oshkosh, Wis., you can turn a Douglas DC-3 into a turboprop aircraft. It's not a difficult conversion — and if you scale up the same process, you can build your own Basler BT-67 in 1/72 or 1/48 scale — or whatever scale your model may be.

The Douglas DC-3/C-47 is a true classic of the aviation world. Since its first flight more than 80 years ago, this airframe has seen just about every conceivable civilian and military use. More than 10,000 DC-3s or C-47s were built, and hundreds are still flying today.

In 1990, Basler Aircraft of Oshkosh, Wis., began turboprop conversions of the DC-3/C-47. The converted aircraft (Basler BT-67) has been sold to civilian and military customers worldwide.

The conversion involves adding a 40" plug to the fuselage, fitting the airframe with Pratt & Whitney Canada PT6A-67R turboprop engines, strengthening the airframe, upgrading the avionics, and modifying the wingtips. Compared to a standard DC-3, the BT-67 has 35% more interior volume, 43% more useful load, 24% more speed, more fuel capacity, and lower approach and stall speeds.

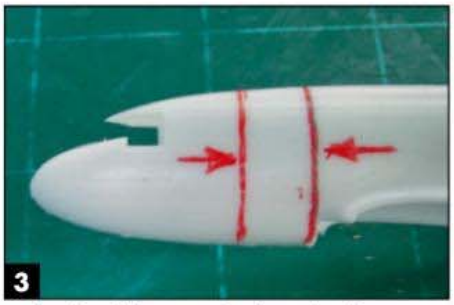
An Internet photo search turned up several interesting schemes for the BT-67, including a striking U.S. Forest Service aircraft in white, red, and yellow. With good reference photos in hand, I decided to give the conversion a try. The first decision was to select a kit — my stash included a 1/72 scale Italeri C-47, a Walthers 1/87 scale DC-3/C-47, and Minicraft's 1/144 scale DC-3. After some agonizing, I chose the Minicraft kit. I already had six of those kits in my completed collection.

Minicraft's DC-3 is a fairly simple build. Converting it to the BT-67 involves three steps — adding the 40" plug (.28", or 7mm in 1/144 scale) just ahead of the wing, replacing the wingtips, and replacing the kit engines and props.

With the surgery that would be required for this conversion, I decided to fill or sand off all panel lines except on the control surfaces. In this scale, it can be argued that panel lines of the real aircraft would not show up anyway.

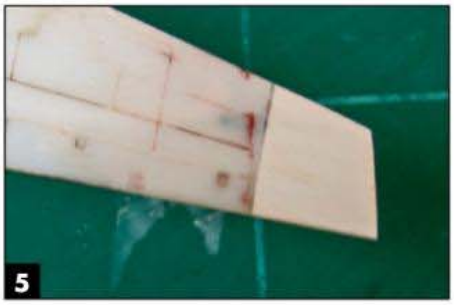
After gluing the fuselage halves together, I consulted references and marked a cut line just forward of the wing slot.

Then I cut through the fuselage with a razor saw.

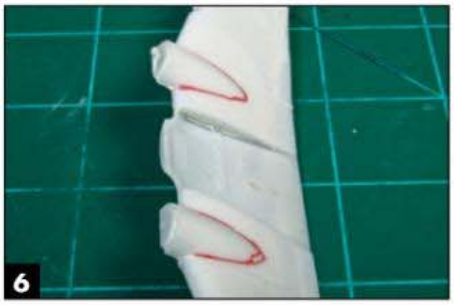


Rather than fabricate a fuselage plug that matched the kit hull, I used a section from a second Minicraft DC-3; the .28" plug is between the red lines.

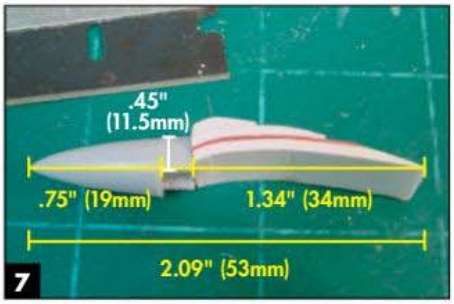
I glued the section with liquid styrene cement and added super glue for strength, then filled and sanded the transition between fuselage sections. I closed the front with the kit's canopy glass but eventually used decals to depict those windows.



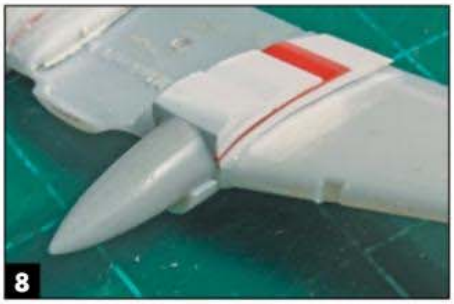
The kit's oval wingtips were sanded off and sections of sheet styrene were shaped and super glued in their place.



It appears Basler converted the DC-3 by removing the original piston engine and the upper portion of the nacelle; the lower nacelle was retained. I did the same, marking the upper nacelles for removal. Epoxy putty filled the voids.

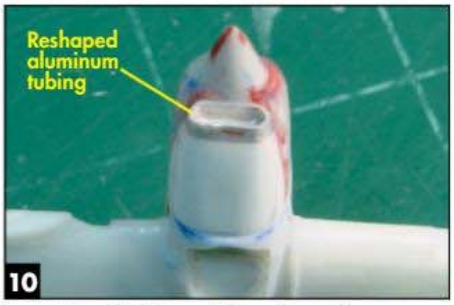


I built an engine to use as a master to resin-cast copies. For the aft part of the nacelle, I heat-shaped sheet styrene to the wing's curve, then built it up with thinner sheets of styrene. The forward nacelle is cut from a spare wing tank and notched to fit the lower-wing firewall.



I dry-fitted the front and rear halves of the new nacelle to the wing; further sanding matched it to the wing's shape. I super glued the upper nacelle parts and placed it (not glued) on the wing to make some final adjustments to fit.

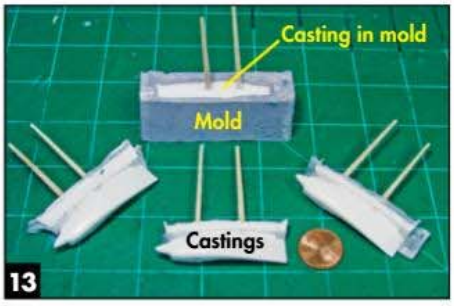
I formed the lower forward intake from sheet styrene.



Squashing aluminum tubing with a pliers produced an oval shape I super glued to the front to represent the air intake lip.

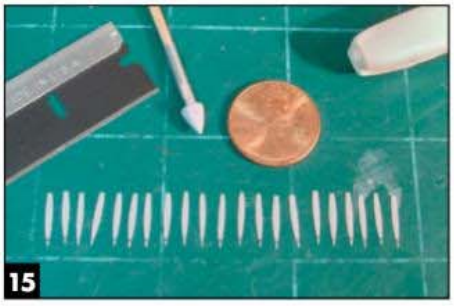
In preparation for making a silicone-rubber mold, I primed the master part with gray auto lacquer and sanded it smooth.

Ready to mold: The mold flask is made from corrugated plastic sheet. The master goes in the flask, and RTV silicone is poured in. After curing, removing the master leaves the mold into which resin will be poured.



Here are three resin castings, along with the mold still holding a casting. I left toothpicks in the resin to aid in removing castings from the mold.

The toothpicks and excess resin were removed and the castings were sanded smooth before mounting the newly cast parts on the model.

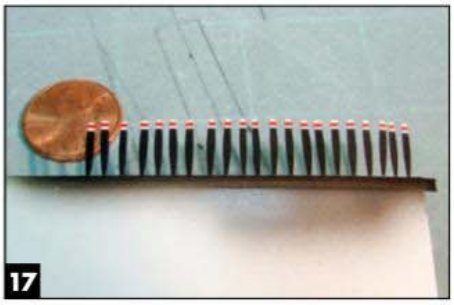


Attaching prop blades to the one-piece casting was difficult. So, I sanded off the cast prop hubs and fashioned new ones from the tips of bombs from my spares box. The prop blades are replacements I cut from .005" sheet styrene.

To mount the prop blades, five equidistant holes are drilled in each hub with a microbit held in a pin vise.

Evenly spaced props

How to evenly space prop blades on a homemade hub with no locators? I determined the holes' locations by wrapping a narrow strip of tape around the rear of the hub. Then I penciled the point where the tape overlaps; the length of the tape from that mark to the starting point of the tape is the hub's circumference. I removed the tape, laid it out flat and straight, measured to the mark, then divided that length into five parts (for five blades). For example, if the length of the tape is 5mm, mark it into five 1mm sections. Then I wrapped the tape back around the hub and used a needle to make pilot holes in the hub at each mark of the tape. Finally, I drilled the locator holes with a microbit in a pin vise and attached the props.

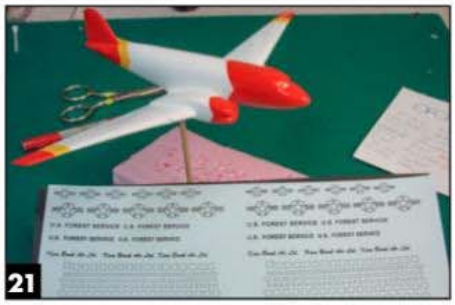


I painted the blades, making a few extras in case I wanted to build more of these planes.

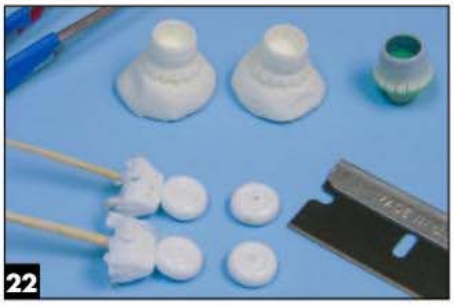
Prop blades are attached to the hubs with a little Elmer's white glue.

I sprayed a coat of gray auto primer, filled imperfections with 3M Acryl-Blue Glazing Putty, sanded everything smooth, and airbrushed two coats of decanted white Dupli-Color auto lacquer. When that was dry, I masked with 3M electrical tape to set the edges of the yellow areas.

After spraying the yellow, I masked it and airbrushed the red sections.



I set the *U.S. FOREST SERVICE* lettering in Microsoft Word and laser-printed it on clear decal paper.

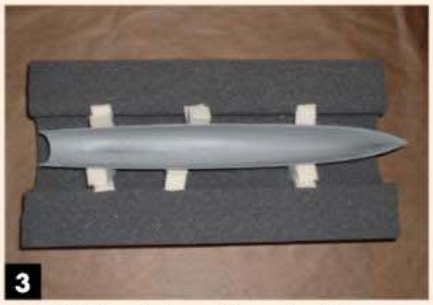


The kit's wheels are too skinny; the DC-3 had fat, balloon tires. So, I made a master and cast new wheels in resin.

Bands between the colors are strips of black decal. The window decals came from my spares; due to the fuselage extension, the BT-67 has more windows than the DC-3 (nine on the right side and eight on the left). Door outlines, de-icer boots, and antiglare panels are from the kit's decal sheet. The white *FIRE* upfront and aircraft registration numbers on the tail are Woodland Scenics dry transfers rubbed onto clear decal sheet and applied to the model. I cut engine exhaust panels from flat black decal sheet. The completed model is a unique addition to my DC-3/C-47 collection. **FSM**

READER TIPS

By Mark Savage



Here are a few photos showing how Wonder Wedges work along with a foam ship cradle from Micro-Mark. Photo 1 shows the wedges' shapes and sizes; No. 2 shows how well they work in the cradle to hold a 1/74 scale subchaser's hull; and No. 3 shows the wedges holding Trumpeter's 1/350 scale HMS *Westminster*.

Easy way to support ship hulls

I have found an easy way to support ship hulls during construction. Most hulls are rounded on the bottom, making then unstable when adding the superstructure and associated parts.

I bought a kit (No. 85819) from Micro-Mark (www.micromark.com) called the Triple Duty Foam Cradle for Model Ships. It has cutout foam sections that are perfect for wider ship hulls. Unfortunately, smaller and narrower hulls don't fit the foam molds.

However, I noticed a makeup product my wife uses that can provide a feasible solution to the modeling problem. These are latex-free flexible, soft foam wedges called Wonder Wedges.

Their shape allows them to be positioned along the sides of any size hull that is placed in the foam cradle. Since the wedges contain no lotion or makeup additives, they are stain-free. Two sizes are available at www.wondercloth.com.

Better news? A bag containing 50 large or 100 small wedges costs less than $10. They're soft, clean, flexible, cost-efficient, and reusable.

The accompanying photos show the wedges used with a couple of different hull shapes: the Glencoe World War I subchaser kit in 1/74 scale, and the Trumpeter HMS *Westminster* kit in 1/350 scale.

– Robert C. Jones, Alameda, Calif.

Make clearer canopies

If you've ever been frustrated with making a canopy as clear as possible, I've got something that will help.

One of the most important features of an aircraft model is a nice, clear canopy that allows you to see the cockpit's interior. Like most aircraft modelers, I've coated the canopy with Pledge FloorCare Multi-Surface Finish and polished it with Tamiya's compound and the Novus polishing set. In some cases, especially with larger items (like Academy's 1/48 scale CH-53E helicopter) that are heavily masked and subsequently handled during assembly, the canopy can be a little cloudy, even after the usual polishing treatment.

I've recently tried a product called Wipe New Headlight Restore. It has a microfiber cloth treated with a nanopolymer solution. Just snip off a piece of the cloth and wipe down your canopy. It's magic. The canopy becomes crystal-clear instantly, and it stays clear.

– Glenn Hoover
Gloucester City, N.J.

Have a tip or technique to share?
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Perfect solution for gear teeth

I do a lot of scratchbuilding, and one of the projects I was working on required some gear teeth. Not wanting to break out the old V-file, I looked around the desk for a solution, then noticed some zip ties. Perfect!

They come in different sizes and can be used in anything that needs gear teeth — turret races, gun leveling mechanisms, most anything. Just use your imagination and I am sure you can think of other applications, too.

– Matthew Higgins
River Ridge, La.

Cardboard = a good "guard"

When I'm building an airplane, at some point prior to painting I'll need to mount the windscreen, canopy, or gunsight. Here's my trick to keep my clumsy fingers from destroying the previously mentioned delicate items: I fashion a "guard" from cardboard — like the kind you get when you buy a new shirt.

Simply cut the cardboard to size and fold it in half, adjust the size if you need to, then tape it to your fuselage. Done!

– Jack Riggar
Santa Rosa, Calif.

Dive into Zvezda's Petlyakov Pe-2

The moment I opened the box, I fell in love with Zvezda's 1/48 scale Pe-2. It was also obvious it was going to be a project, not because Zvezda's kit is bad but because it has 435 parts.

The major parts show amazing surface detail, including recessed panel lines and rivets that look true to scale.

The kit provides a few construction options, including gear up/in-flight (although no stand is provided) or gear down. One complete Klimov M-105 V12 engine is provided and can be displayed with the cowl panels off of one nacelle.

That's where construction starts. If you build it with the engine closed up, you can save yourself eight steps and 44 parts. The engine has a lot of detail. All of the plumbing and hoses are there; the only things missing are spark-plug wires.

The wing halves sandwich four oil cooler intakes with finely molded screens. The separate leading edges don't fit just right, and cleaning the seams will damage the fine surface detail.

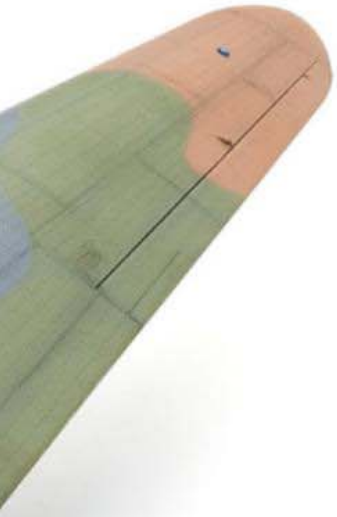
Seven pieces comprise the landing gear struts and fit flawlessly. The exquisitely molded tires include sidewall labels.

Looking into the wheel wells reveals the aft end of the engines with plumbing and hoses. The kit provides this detail for both nacelles, even if you omit the full engine.

Attaching the nacelles revealed a small gap underneath that was easily eliminated with a little putty.

If you choose to build the exposed engine, the instructions have you mount it to the wing before attaching the wing to the fuselage. I recommend leaving it off until final assembly, because the attachment points are delicate.

Zvezda provides full interior detail front to back, including individual rudder pedals, push rods for the controls, throttles, mix-



ture and propeller controls, trim wheels, seats, ammunition cans, guns, radios, and a lot more. I don't think they missed a thing. Two instrument panels are provided, a smooth part designed for decal dials, and one with molded detail. I applied the decals to the latter without problems. The instructions omitted color callouts for some parts. Two finely molded figures are provided.

The fuselage closed around all of the interior parts perfectly. The horizontal stabilizers were next and looked like they were molded with the fuselage without filler. Awesome fit!

The clear parts are detailed but a little cloudy; a dip in Pledge FloorCare Multi-Surface Finish improved their clarity.

Decals provide marking for three Soviet aircraft: one from the 12th Guards Dive-bomber Aviation Regiment, 1944; one from the 40th Bomber Regiment, 2nd Squadron, Black Sea, 1944; and finally, an aircraft of the 34th Guards Red Banner Regiment, 276th Bomb Group, 1945. I chose the first, and the decals laid down beautifully. But the registration wasn't quite perfect and Microscale Micro Sol caused some of the ink to run.

Zvezda's Pe-2 is the most comprehensive aircraft model I've ever built. Aftermarket details would be redundant; about the only things it needs are seat belts and a wiring harness for the engine.

Other than the off-register decals and a mildly warped canopy, it's trouble-free. I recommend the Pe-2 to anyone, and I plan to add more Zvezda kits to my inventory.

– *Caleb Horn*

Kit: No. 4809 **Scale:** 1/48
Manufacturer: Zvezda, www.zvezda.org.ru **Price:** $44.99
Comments: Injection-molded, 435 parts, decals **Pros:** Terrific detail and fits
Cons: Clear parts slightly cloudy; delicate attachment of exposed engine; decals off-register, solvent caused ink to run

Tamiya M4A3E8 "Easy Eight" Sherman

Let's get this out of the way: This kit should not be confused with Tamiya's reboxed Asuka M4A3E8 kit released in 2014. Instead, this is an easy-to-build model of the late-war Sherman that shares a few parts with Tamiya's M51; most of the parts beyond the suspension bogies are new.

Typical of Tamiya, the engineering and documentation make for a straightforward project that quickly produces a good-looking replica of the ultimate World War II Sherman. The trade-off is some simplified details, such as solid-molded hatch handles and open-backed springs in the suspension.

Separate sides, floor, rear plate, and transmission cover come together in the lower hull and fit perfectly. The cover features an understated cast texture, a detail carried over to the turret. Detailed instructions are augmented by alignment drawings.

Molded slots and ridges allow the idler shafts (parts L20) to be attached in one of several positions. My reticence to lock them into place as indicated in Step 6 proved unfounded; the track tension was perfect.

Tamiya's approach to the exhaust deflector impressed me. The four individual curved vanes fall neatly together with the ends, and the whole assembly drops into place and remains movable. Very sharp!

The idlers and drive sprockets sandwich polycaps and can turn on their axles. The bogies are simple to build and provide solid support for the model, but would require major surgery to articulate. I added the volute springs and center parts but left the road wheels off for painting. The hollow springs are open on the back, but you have to look hard to see that on the model.

The upper and lower hull are held together with a clip and polycap. The fenders are molded with sponson blocking plates so no daylight is visible through the vehicle's body.

The driver and machine gunner hatches are separate and have interior detail, including periscopes. They can be posed open, but there's no interior. Optional parts can be used to support figures from Tamiya's U.S. Tank Crew Set (No. 35347, sold separately).

Individual tools detail the hull. The 22 fender support brackets have different ends, so pay attention when installing them.

The turret halves fit pretty well, but a little sanding was needed. I stippled the surroundings with liquid cement and a stiff brush to restore lost casting texture.

A minor mold seam in need of sanding mars the single-piece main gun barrel. It slots positively into the three-piece muzzle brake and mantlet. I was concerned that the unique attachment of the main gun and turret would leave it loose, but it's strong.

I closed the loader's hatch but left the commander's cupola off for painting.

After airbrushing the model with Tamiya acrylics, I applied the decals. The marking options are a tad uninspired, either all white stars, or white stars with blacked-out turret markings. No individual ID numbers are included.

I added the road wheels to the bogies and mounted the bogies to the hull. The latter connections are very firm and lock the bogies in place.

The vinyl tracks replicate the T66 cast-metal links used on early Easy Eights; they fit neatly on the suspension. I used liquid cement to join the ends; a little extra cement encouraged the tracks to settle naturally around the sprockets and idlers.

The individual visors for the cupola dropped into place before the ring was attached to the turret. Molding them this way makes painting a snap.

A commander — or at least a guy from the waist up — fits neatly into the hatch and tops off a great build.

I had a blast building Tamiya's M4A3E8. There are 1/35 scale Easy Eights with more-refined details, but terrific engineering and foolproof assembly make this one a ton of fun to build.

–Aaron Skinner

Kit: No. 35346 **Scale:** 1/35
Manufacturer: Tamiya, www.tamiya.com **Price:** $53
Comments: Injection-molded, 410 parts (10 vinyl), decals **Pros:** Trouble-free build; great figure; clear headlights and commander's viewports **Cons:** Simplified details; limited marking options

Airfix Heinkel He 111P-2

Airfix's new He 111 features fine recessed surface engraving, nice interior detail, and includes lots of additional parts for the cockpit, wheel wells, bomb bay, and the gunner's cradle for the dorsal gun position.

The kit depicts the Daimler-Benz DB 601-powered P-2 model. Parts not for use in the kit indicate other variants to be released in the future, likely H models with Jumo engines.

Options include separate control surfaces, retracted or extended flaps, and open or closed bomb-bay doors.

The cockpit and dorsal gun-position hatches may be posed open or closed. Closed landing gear doors and a retracted tail wheel are supplied for posing the aircraft in flight. There's no stand in the kit, but Airfix offers one separately.

With all that detail, plus decal instrument panels, the cockpit looked terrific. The three softly molded crew figures had sinkholes in their torsos. So, I passed them up and instead added masking tape belts to the seats.

Each main landing-gear strut comprises four scale-thin parts and builds into sturdy foundations for the model.

The three-color instructions follow Airfix's practice of using CAD-type illustrations. Between those and the keyed parts, assembly progressed smoothly.

Fit was great throughout and no filler was needed on the fuselage seams or upper nacelle-to-wing joints.

For a more interesting display, I extended the flaps and offset the control surfaces. The instructions show the correct travel limits for the flaps and ailerons, and the elevators are movable if desired.

Clear pieces were a big part of the model, but, unfortunately, they weren't the best part of the kit. Besides being a tad thick and not perfectly clear, three of the parts had stress marks.

The forward part of an He 111 is an egg of clear components comprising four parts on this kit. Assembly means gluing clear piece to clear piece, which takes a delicate touch. Prior to painting, a lot of masking is required as well.

The eight cabin windows are installed from the outside, after the model is painted. I had some fit issues with these parts, possibly my fault, so I ended up using clear acrylic glue for the windows instead.

Decals provide markings for an He 111 from 5./KG 4 and one from 6./KG 55.

Color callouts reference only Humbrol paints, but RLM numbers also are given. The only exception was Humbrol No. 240 (RLM 02), which was omitted from the color samples.

The decals featured full stencil data, adhered well, and were opaque, but were a little thick and resisted efforts to convince them to snuggle into panel lines and detail; I had some silvering. Swastikas are not included on the sheet.

This big model is not a difficult build, but it could be challenging due to the extensive glazing. I spent about 30 hours building mine.

– Walt Fink

Kit: No. A06014 **Scale:** 1/72
Manufacturer: Airfix, www.airfix.com
Price: $29.99 **Comments:** Injection-molded, 153 parts, decals **Pros:** Terrific interior details; posable control surfaces; great fit **Cons:** Thick clear parts, decals

Trumpeter USS *Tennessee* BB-43

Despite being damaged at Pearl Harbor and subsequently rebuilt and designated an OBB (battleship, old) by naval planners, USS *Tennessee* earned 10 Battle Stars in World War II. During the island-hopping march on Japan, the ship supported assault landings, sometimes firing on targets as close as 600 yards, and gained special respect from Marines calling in close fire support. The 40,950-ton vessel participated in the last recorded battleship versus battleship engagement when *Tennessee* and five other OBBs in Adm. Jesse Oldendorf's Task Group 77.2 "crossed the T" at Surigao Strait and sank Japanese battleships *Fuso* and *Yamashiro* while protecting the invasion fleet at Leyte Gulf.

Trumpeter's well-packaged kit includes the option to build the *Tennessee* either as a full hull or waterline model. The box contains six single parts, 27 sprues, and a photo-etched (PE) fret for a total of 657 parts. Don't worry — some of the parts are extras, so you'll only need to squeeze about 500 parts onto a 10.6" x 1.9" deck. Take your time and have fun!

The crisply molded gray plastic parts show little flash and minimal mold seams.

I was pleased to see that the splinter shields for the 20mm galleries are the correct height, a welcome change compared to the knee-high parts found in many older 1/700 scale kits. The 5"/38 turrets are molded from the back with well-defined sighting hoods and hatches.

Some mounting points were a bit thick, and I shaved the inner walls of a number of the structures for flush fits. Dry-fit subassemblies often to avoid problems.

The 24-step instructions provide all the information you need to build the kit, but they require some searching to get it done. For example, Step 5 indicates installation of Mk.37 gun directors, but those parts are not assembled until Step 11. Only three of 58 subassemblies are identified with a lowercase letter for port or starboard placement, so I numbered the latter locations before cutting the parts from the sprues.

Beyond those issues, the building of major sections progressed well.

Steps 8 and 9 produce the beautifully detailed PE crane and catapult, but plastic options are provided.

In Step 23, the prop shafts are reversed: part Q19 is the inner shaft, Q23 the outer.

The painting guide is pretty accurate for the Measure 32/1d camouflage, but the gunship gray called for on the deck is inaccurate. It should be deck blue 20B or ocean gray 5-0. I hand-painted the dazzle camouflage with Model Master light gray and interior black at each stage of assembly, because masking in this scale is difficult and often blocked by gun tubs and other details at the end of construction.

This well-researched and accurate model has a couple of minor lapses. First, the painting and marking guide shows OS2U Kingfisher aircraft — right for 1944 — but the kit provides 1945 Curtiss Seahawks instead. Second, the boxtop shows CXAM radar, but *Tennessee* was equipped with a smaller SC-2 unit.

Those items aside, the kit accurately portrays the widened hull, compact superstructure, and weapons fit of this rebuilt Pearl Harbor survivor in 1944. It's a fine tribute to an unsung hero of the 7th Fleet Fire Support Group, which saved many a Marine ashore in a hostile territory.

– Mark Karolus

Kit: No. 5782 **Scale:** 1/700 **Manufacturer:** Trumpeter, www.trumpeter-china.com
Price: $54.95 **Comments:** Injection-molded, 657 parts (15 photo-etched), decals
Pros: Good detail and fit **Cons:** Wrong aircraft; confusing instructions

Takom Mk.A Whippet

As the recent interest in modeling World War I tanks blossomed, it seemed only a matter of time before a new 1/35 scale Mk.A Whippet hit hobby stores. Takom answered the call, and the kit's a beaut.

Looking to complement the heavy and slow Mark IV and exploit openings in the lines, the British army ordered the faster Whippet; it could make 8 mph versus the Mark IV's 4 mph! Armed with machine guns, the Whippet entered combat in March 1918.

The full-size vehicle comprised flat armor panels bolted and riveted together, and the kit looks pretty much the same. Molded in gray plastic, Takom's Whippet shows gorgeous surface detail with crisp rivets and bolt heads.

The instructions start with the road wheels — all 32 pairs. That means clipping and cleaning up 32 axles and 64 wheels. To keep the working tracks moving, the wheels are not glued to the axles. But that means keeping track of a lot of loose pieces that are subtly different. I placed the sets in ziplock bags marked with subassembly numbers. And about the time you think you are ready to make a major step forward, you have to build 10 return rollers. The idlers and drive sprockets were a piece of cake.

Next came the sponsons. First I installed the road wheels, limiting how much glue I used to ensure the wheels would move.

Now for the tricky part: installing the braces and plates for the mud chutes. It's not difficult to do, but you need to make sure the wheels don't go walkabout until everything is in place, lined up, and secured with the outer sponson plate. I could have used a couple of extra hands. Keep pointed tweezers handy to reach into tight spaces and finagle the dozens of parts into position when mating the outer wall.

I left off the tiny photo-etched hooks as well as the track spuds until after painting; the former because I knew I'd knock them into the ether the first chance I got, the latter because the hull numbers need to be applied under them.

Sponsons done, the model progressed quickly.

The machine-gun swivel mounts work well. Use slow-setting cement to assemble the fighting compartment. A lot of panels attach along odd angles, and their final resting places may not be obvious until all of the parts are in place.

The individual-link tracks came as a breath of fresh air after feeling like I didn't have enough hands to built the sponsons and fighting compartment. Each link snapped into the next. I recommend placing one pin in the corresponding hole in the next link, then twisting the link until the other pin clicks into place.

Eight marking options are provided, including three British Whippets in France in 1918, another British tank in Dublin in 1919, and two German vehicles, one in three-color wartime camo, the other with the *Freikorps* during the German Revolution in 1919. The remaining options are two of the Whippets sent to Russia during the civil war, one in White army service, the other with the Red army.

Kit: No. 2025 **Scale:** 1/35
Manufacturer: Takom, www.takom-world.com **Price:** $49.95
Comments: Injection-molded, 493 parts (35 photo-etched), decals **Pros:** Good moldings and fits; click-together individual-link tracks; smart use of PE; great marking options **Cons:** Fiddly construction made me wish I had extra hands

I painted mine with Ammo of Mig Jimenez acrylics and marked it as one of the British army tanks. Breaking from the instructions, I painted the machine-gun mounts black and the track spuds wood with dark iron fittings to match information in David Fletcher's *Medium Mark A Whippet* (Osprey, ISBN 978-1-78200-398-4).

The decals responded to Microscale Micro Sol.

I added the tracks and spuds to finish the build.

There's a lot to like about Takom's Whippet. Although challenging in the way origami can be, it's not difficult — and the result looks terrific.

– Aaron Skinner

Valom F-101C Voodoo

Valom's new F-101C is the first 1/72 scale kit of the single-seat fighter-bomber version of McDonnell's big jet. Before now, the Voodoo that you'd do would have been the ancient Hasegawa RF-101C recon aircraft or the newer Revell two-seat F-101B interceptor.

The all-new kit captures the graceful, purposeful shapes of the jet in plastic, along with improved detail provided by cast resin afterburners, wheels, and intake trunks, and photo-etched (PE) landing-gear doors, harness, and other small items. The sprues include parts for the reconnaissance jet.

Kit: No. 72095 **Scale:** 1/72
Manufacturer: Valom, www.valom.net
Price: $47 **Comments:** Injection-molded, 114 parts (8 resin, 28 photo-etched), decals **Pros:** Good overall shapes and detail, choice of two-piece open or one-piece closed canopy; drop tanks **Cons:** Errors and omissions in the instructions and decals; some fit problems; no wing fences

Other features include a pair of drop tanks and a choice of one-piece closed or two-piece opened canopy.

Assembly of this short-run injection-molded kit was simple, but hampered by instructions that don't clearly show some details, leave out a few, and sometimes indicate the wrong parts.

Starting with the cockpit, the instructions show the instrument panel and viewer hood for the recon version (parts 16 and 27); use the other panel (17) for the fighter. Also choose the alternate coaming (19). Valom would have you add 12g (.4 oz.) of weight to the nose, but none is needed.

The resin intake trunks fit well and provide a view of plastic turbine fans at the rear. Rectangular PE splitters install inside the intakes, but the instructions show them as curled items.

Step 4 shows assembly of the main landing gear with views of the assembled struts and doors, but nothing shows how or where they and an internal brace are mounted in the wing wheel wells.

The worst fit was underneath where the wing met the forward fuselage. The flat rectangle at the front sat deep, while the rounded front ends of the engine bays ½" away sat proud. Sand, fill, sand, fill …

I liked the resin afterburners, but they are 1/16" short at the front.

No locators are provided for the separate cannon fairings, so I dug into my references to determine exactly where on the nose they should be. The instructions incorrectly locate the PE angle-of-attack vanes; they should go ¼" behind the radome on either side.

Watch out while attaching the horizontal stabilizers; the tiny locator pins don't provide much gluing surface for firm attachment. F-101Cs had a small tubular intake high on the fin's leading edge, but it isn't provided in the kit.

The closed canopy did not fit well at the rear, so I used the opened version. A pair of tiny PE rearview mirrors should be attached to the bow of the canopy, rather than the windscreen as shown.

Most photos of the 81st TFW Voodoos at RAF Bentwaters show them without drop tanks, so I left them off.

I painted my model with several shades of Alclad II lacquers and accented a few nose panels with Bare-Metal Foil.

Decals provide markings for two jets of the 81st TFW; I chose the colorful commander's bird. While the decals went on without problems, there was still trouble: The cutout for the horizontal stabilizer area on the tail is not the same shape or location as on the model. Also, the white stars are missing from the blue area, even though they are shown in the full-color marking instructions. Instead of providing decals, Valom would have you paint the main wheel covers and wing- and stabilizer-tips in the same colors as the tail design. I cut mine from solid-color decal trim film. The red turbine warning stripe around the rear fuselage should go about ⅜" forward of where Valom shows it.

The instructions also indicate blue for the fences on top of the wings. Wait a minute: Valom didn't mold the fences or give you PE fences.

I built my Valom Voodoo out of the box, but it's going to take more than the 34 hours I put into it to make it look right. I'll scrounge my decal collection for white stars to add to the tail, and cobble up some thin wing fences, too. So, this kit has potential, but care — and extra work — will be needed to realize it.

– Paul Boyer

Italeri ATR 42-500

Airliner modelers greeted the prospect of a mainstream ATR 42 with enthusiasm when Italeri announced it several years ago. Features include: a cockpit (unusual in 1/144 scale); open cabin windows to be filled with clear inserts; optional parts to display the gear up or down; and a display stand.

The white plastic parts are flash-free, but many of the recessed lines feel rough and have minor ridges on either side. Several passes with 1500-grit sandpaper smoothed the surfaces.

The cockpit has slightly odd dimensions, but most of it won't be visible through the thick windshield.

The good news is the windshield fits perfectly, and well-defined frames facilitate masking. I left the cabin window inserts out, instead filling them with Microscale Kristal Klear after painting.

After weighting the nose with lead sinkers, I closed up the fuselage. The fit was nearly perfect, requiring just a little filler along the seam. Unfortunately, the forward fuselage is misshapen. Everything in front of a panel line that runs around the fuselage behind the cockpit is slightly too big, like it's ever-so-slightly overinflated. Fifteen minutes with progressively finer sanding sticks corrected the shape. Trailing edges of the wing and rudder are thick. I added the nacelles to the wing, but left the wing and fuselage separate for painting.

Cartograf decals, a highlight of the kit, provide three marking options: two Surveyors, the maritime patrol version, one each from the Italian coast guard and Italian financial guard; and the one I chose, an airliner from Mexican carrier Aeromar. I painted the airframe with Tamiya spray-can pure white over Tamiya white fine surface primer. The painting diagrams show some details — such as the de-icing boots, exhaust tracks, and some natural metal points and corners — but no color callouts. Good references are essential; I recommend www.airliners.net. The decals fit the molded door outlines and windows perfectly, but the aircraft should have ATR 42-500 logos on the fin.

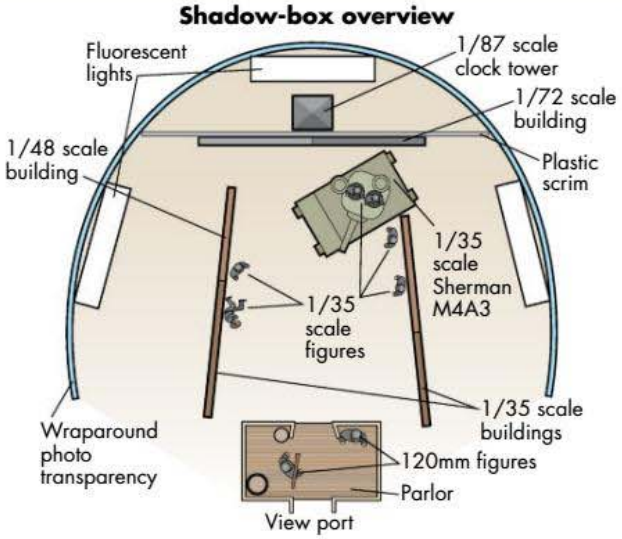
The finished model looks good and scales out on the money, but the nose gear seems too tall. None of the shape problems are a deal breaker, but be prepared to sand to make the most out of Italeri's turboprop.

– Aaron Skinner

Kit: No. 1801 **Scale:** 1/144
Manufacturer: Italeri, www.italeri.com
Price: $29.99 **Comments:** Injection-molded, 62 parts, decals **Pros:** Clear windows; stand; good decals; feathered props **Cons:** Thick trailing edges; rough moldings; shape issues; omissions in the painting instructions

QUESTIONS & ANSWERS

By Mark Hembree



Gaining a sense of perspective

Q I have been searching for guidance on building a diorama. In particular, I would like to use two different scale model tanks and military figures, but I'm not sure how far apart they should be to look like they are in the same scale. For example, I would have a 1/35 scale tank in the foreground and want to depict a smaller scale tank about 500 yards away. How far apart are they in the diorama? Is there an equation for future reference?

– Tom Nugent, Dallas Center, Iowa

A There are equations for everything, including perspective. But scale modelers who succeed in forced-perspective illusions rely mainly on their eyeballs and what looks right.

Mike McFadden, who has had several such pieces in *FSM*, says, "There isn't a formula for this. Just play around and do a best guesstimate." He suggests that, in addition to the models, use the available space around them to enhance the illusion of distance.

An excellent example of the latter is his shadow-box diorama (October 2014 *FSM*, above left). Germans in the foreground are 120mm, the closest buildings outside are 1/35 scale, those farther down the street are 1/48 scale, the building behind the tank is 1/72 scale, and the tower in the distance is 1/87 scale. Additionally, there is a translucent scrim in front of the tower, providing the haziness of a distant object (see drawing). So he uses not just the models but their surroundings to build the illusion.

Just as importantly, Mike built a view port to ensure the viewer sees the scene from the intended vantage point. Seeing it from above or the side would dispel the effect.

As wonderful as Mike's scene is, he arrived at it through experimentation and what looked right to him.

Molds for casting resin — one part or two?

Q I've watched Aaron Skinner's videos on FineScale.com about resin casting. I'm about to try it myself; I got the Alumilite Mini Casting Kit for Christmas. What I'd like to cast is a 1/24 scale car dashboard. What would be the best way to do this — one- or two-piece mold?

– Trevor Myrus
San Marcos, Calif.

A Whether you use a one- or two-piece mold really depends on the part you are casting. I can't give you a definite answer without seeing the piece.

The dashboard on most car models doesn't have much detail on the back. In that case, you can use a kit part for a master to make the mold. If you don't need detail on the back side, the instrument panel is not too deeply recessed in a cowl, and there are not other big overhangs that would make it hard to extract from the mold, a one-piece mold would probably do the trick. That is definitely easier than figuring out a two-piece mold.

But, again, without seeing the part I can't tell you for sure.

Locating AVLB kits

Q Are there 1/35 scale kits of an armored vehicle-launched bridge?

– Jeff McIntyre
Sparks, Nev.

A Jeff, here's what I found in 1/35 scale:

- Accurate Armour bridgelayer conversion (No. CO57) for Tamiya Chieftain
- Elite Brückenleger "Biber" IVB (No. 3518)
- Hobby Fan M48 Patton AVLB (No. HF018)
- Trumpeter Brückenleger IVB (No. 00390)

And in other scales:

- Revell/Revell Germany M48 "Scissors Bridge" (No. 00017), 1/40 scale
- Airfix Churchill Bridgelayer (No. A04301), 1/76 scale
- Wee Friends Chieftain Mk.6 (kit No. WV76023), 1/76 scale

Thanks for writing. Hope this information provides a span to what you want. **FSM**

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COMING EVENTS

IL, CRYSTAL LAKE Fifth Annual Northern Illinois Model Contest (NIMCON 5): McHenry County College, 8900 Hwy 14, Crystal Lake; Saturday, May 21, 2016; 9am-4pm; contest judged under Gold/Silver/Bronze rules with Armor entries judged by AMPS Chicagoland; giant raffle, numerous vendors, food available from WGW Foods, Inc. For info visit: www.lakesregionmodelers.com

NV, LAS VEGAS: International Plastic Modelers Society, Las Vegas Best of the West 21 "Vegas-Con". Orleans Hotel and Casino, 4500 West Tropicana Ave. Saturday, May 7, 2016, 9:00am-4:30pm. $10.00 fee includes 3 entries. Facebook "IPMS Las Vegas Best of the West Model Contest" or E-mail jwporco@embarqmail.com for more information. Vendor tables available. Rules/Registration Forms/Room Rates IPMSLV.ORG/

CANADA, BRAMPTON, ONTARIO: Torcan 2016 Model Contest. Century Gardens Recreation Centre, 340 Vodden St. E. Sunday, May 1, 2016, 9:00am-5:00pm. General Admission $5.00, children 12&under free. Contestant Admission: Adult $15.00 includes 3 models, $2.00 each additional entry. Junior $7.00 includes 3 models, $1.00 each additional entry. Hosted by Peel Scale Modelers. Visit www.TorcanModelShow.com or info@peelscalemodelers.com

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By Mark Hembree

Remodeling your space

In the March 2016 "Final Details," we invited you to share your thoughts and photos of your model collection, and your rationale for its growth and keeping — and boy did you ever!

Arend Hoogervorst of Kloof, KwaZulu-Natal, South Africa, writes, "When my (unbuilt) stash reached 900, I realized I needed to take serious action." So he brought in a kitchen designer to map out floor-to-ceiling shelves in his hobby room. He quickly filled the new space. "My stash now sits at just under 1,100 unbuilt models, and piles have begun to appear on the floor.

"Of course I intend building every one of them, but whether there is enough time in the rest of my life to complete them (including 1/200 scale battleships and aircraft carriers, and sundry 1/350 scale cruisers and destroyers) is a matter that remains to be calculated. I might need to live until at least 2050.

"I have told my wife that the collection has good investment value, but whether or not she believes me is still a matter for confirmation.

"Why do I keep them? Well, I like to look at the boxed kits. I have a system whereby I buy multiple kits and leave at least one sealed and unopened. The other kits, I will look at, revisit, ponder, review, spread out on the table, examine, and, yes, even build them." **FSM**

Thanks for responding — we will be showing more of these!

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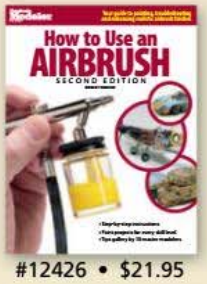

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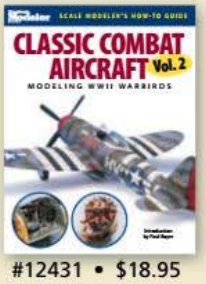

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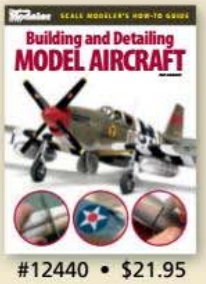

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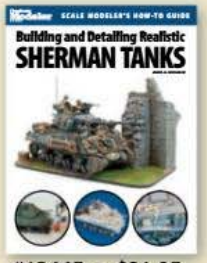

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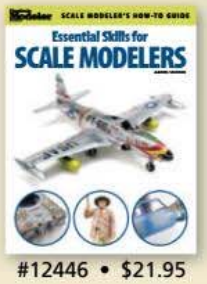

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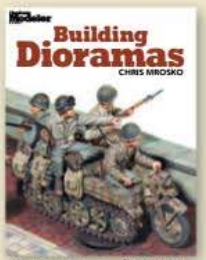

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1/48 SCALE

USAF T-33A

Shooting Star, TR-892

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EARLY VERSION

The T-33 was developed from the Lockheed P-80/F-80 by lengthening the fuselage by slightly over three feet and adding a second seat, instrumentation and flight controls. It was initially designated as a variant of the P-80/F-80, the TP-80C/TF-80C.

Design work for the Lockheed P-80 began in 1943 with the first flight on 8 January 1944. Following on the Bell P-59, the P-80 became the first jet fighter to enter full squadron service in the United States Army Air Forces. As more advanced jets entered service, the F-80 took on another role—training jet pilots. The two-place T-33 jet was designed for training pilots already qualified to fly propeller-driven aircraft.

Originally designated the TF-80C, the T-33 made its first flight on 22 March 1948 with U.S. production taking place from 1948 to 1959. The US Navy used the T-33 as a land-based trainer starting in 1949. It was designated the TV-2, but was redesignated the T-33B in 1962. The Navy operated some ex-USAF P-80Cs as the TO-1, changed to the TV-1 about a year later. A carrier-capable version of the P-80/T-33 family was subsequently developed by Lockheed, eventually leading to the late 1950s to 1970s T2V-1/T-1A SeaStar. The two prototype TF-80Cs were modified as prototypes for an all-weather two-seater fighter variant which became the F-94 Starfire. A total of 6,557 Shooting Stars were produced, 5,691 by Lockheed, 210 by Kawasaki and 656 by Canadair.

T-33A variation: Two-seat jet trainer aircraft for the United States Air Force and delivery to foreign air forces under the Military Aid Program, 5871 including 699 diverted to the United States Navy as the TV-2.

MODEL TOP VIEW

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